

JUDGE TORRES

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

18 CV 376

CORMAC L. KINNEY

Plaintiff,

v.

ARTHUR JOSEPH LIPTON,

JAY C. PLOURDE,

SECURED WORLDWIDE, LLC, a/k/a

SECURED WORLDWIDE SERVICES INC, a/k/a

AMERICAN DIAMOND MINT LLC,

Defendants.

CASE No. _____

Jury Trial Demanded

COMPLAINT AND JURY DEMAND

Plaintiff, Cormac L. Kinney ("Kinney") for his Complaint against defendants Arthur Joseph Lipton ("Lipton"), Jay C. Plourde ("Plourde"), Secured Worldwide, LLC ("Secured"), Secured Worldwide Services Inc., and American Diamond Mint LLC, states as follows:

NATURE OF THE CASE

This is an action for correction of inventorship arising under the patent laws of the United States, 35 U.S.C. § 100 et seq., and unjust enrichment due to the defendants' intentional actions, depriving Kinney of the sole ownership of and title to U.S. Patent Application No. 14/619,633, entitled "*Secure diamond smart cards and exchange systems therefor*" the ("Kinney Patent Application").

THE PARTIES

1. Plaintiff, Cormac L. Kinney, is a citizen of the State of New York.

FILED
U.S. DISTRICT COURT
S.D. OF N.Y.
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2. Upon information and belief, defendant Lipton is a citizen of the State of Connecticut, and is Managing Member of Secured.
3. Upon information and belief, defendant Plourde is a citizen of the State of New York, and is a Member of Secured.
4. Upon information and belief, non-party witness Max Mr. Moskowitz is a citizen of the State of New York, an attorney, and partner at intellectual property law firm Osterlink Faber LLP.
5. Upon information and belief, Mr. Moskowitz was and is the patent counsel for Secured and also represents Lipton personally.
6. Upon information and belief, defendant Secured is a Delaware limited liability company with its principal place of business in New York.
7. Upon information and belief, defendant American Diamond Mint LLC is a Delaware limited liability company with its principal place of business in New York.
8. Upon information and belief, defendant Secured Worldwide Services Inc. is a Delaware corporation with its principal place of business in New York.

JURISDICTION AND VENUE

9. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, and 1367, and 35 U.S.C. § 256.
10. Venue is proper in this Court as to all parties under 28 U.S.C. § 1391.
11. While jurisdiction for claims regarding inventorship in pending patents generally resides with the U.S. PTO's Board of Appeals and Interferences, this Court is permitted to assert jurisdiction, due to the fact that Kinney seeks declaratory relief of an assignment, and alleges fraud and unjust enrichment. See *Kunkel v. Topmaster Int'l, Inc.*, 906 F.2d 693, 695 (Fed. Cir.

1990), and *Air Prods. and Chems., Inc., v. Reichhold Chems., Inc.*, 755 F.2d 1559, 1563-64 (Fed. Cir. 1985)

12. Supporting the assertion of jurisdiction by this Court, a third party has sued Secured and Lipton in a distant District Court, demanding to be awarded rights to the Kinney Patent.

GENERAL ALLEGATIONS

13. Upon information and belief, Secured is a closely held company, majority owned by, and controlled by Lipton. Secured is Lipton's alter-ego.
14. Upon information and belief, American Diamond Mint LLC is a closely held company controlled by Lipton, operating in concert with Secured.
15. Upon information and belief, Secured Worldwide Services Inc. is a closely held corporation controlled by Lipton, operating in concert with Secured.
16. Kinney is an inventor who developed extensive trade secrets and intellectual property related to diamond packaging, technology and authentication, from 2013 to present.
17. From August 2013 through February 2015, Lipton fraudulently induced Kinney to disclose his trade secrets to Lipton, Plourde and Secured. Lipton's fraud was found as fact by Chief Judge Colleen McMahon, in the U.S. District Court for the Southern District of New York, in case 15-cv-1761.
18. A true copy of Judge McMahon's findings and verdict in 15-cv-1761 is attached as Exhibit 1.
19. Kinney disclosed and contributed his trade secrets to Secured due to the fraudulent inducement by Lipton, who falsely claimed to have obtained an essential license from a third party, and falsely claimed to have granted a 12.25% interest in Secured to Kinney.
20. Chief Judge McMahon found as fact that Plourde was aware of, and intentionally concealed Lipton's ongoing fraud from Kinney.

21. Judge McMahon has since rescinded all agreements between Kinney and Secured.
22. Based exclusively on Kinney's drawings, documentation and detailed explanations of his inventions, Mr. Moskowitz, a patent lawyer retained by Lipton on behalf of himself and Secured, drafted the Kinney Patent Application.
23. Unbeknownst to Kinney, Lipton instructed Mr. Moskowitz to list Lipton and Plourde as co-inventors on the Kinney Patent Application.
24. Upon being presented the Kinney Patent Application for signature, Kinney questioned the unexpected and unwarranted appearance of Lipton and Plourde as joint inventors. Lipton informed Kinney that being characterized as inventors was essential to enable Lipton and Plourde to raise capital for Secured.
25. Mr. Moskowitz informed Kinney that it was not uncommon for a company CEO to be listed as an inventor, and instructed Kinney to sign the application declaration and assignment for the benefit of Secured, without informing Kinney of his legal obligations and any potential repercussions.
26. Kinney signed the Kinney Patent Application, oath and declaration in February 2014, having been fraudulently induced by Lipton, and at the instruction of Mr. Moskowitz.
27. Kinney simultaneously signed an assignment of the Kinney Patent Application to Secured, fraudulently induced by Lipton, and at the instruction of Mr. Moskowitz.
28. Kinney had no experience with patents. Had Kinney known that Lipton and Plourde were making willful false statements, committing fraud upon the USPTO, and defrauding Mr Kinney, he would never have consented to attest to their inventorship.
29. Kinney's oath and patent declaration was truthful, asserting himself as the inventor.

30. If Kinney did unintentionally attest to Lipton's and Plourde's false statements on their oath and declarations, in which they falsely list themselves as joint inventors, it was not willful. Kinney followed the instructions of Mr. Moskowitz, and was the victim of Lipton's ongoing fraud, which fraud was intentionally concealed by Plourde.
31. By signing the oath and declaration, Lipton and Plourde did make false, material representations of fact, with the intent to deceive the USPTO.
32. On February 11, 2014, the Kinney Patent Application and its assignment was filed by Mr. Moskowitz.
33. A true copy of the Kinney Patent Application is attached as Exhibit 2.
34. Kinney's assignment of the Kinney Patent Application to Secured was rescinded by Chief Judge McMahon, due to Lipton's fraud.
35. For the same reasons, due to Lipton's various frauds, that Chief Judge McMahon rescinded all of Kinney agreements with Secured, Kinney's assent, on any document presented to the USPTO, to joint inventorship of the Kinney Patent Application with Lipton and Plourde should be rescinded.
36. Kinney was not an employee of Secured during the time that the inventions in the Kinney Patent Application were conceived and/or reduced to practice.
37. Kinney received no compensation from Secured, or any other person or entity, for his research, development and work performed, totaling one year of full time labor, during which he conceived and reduced to practice the inventions in the Kinney Patent Application.
38. Kinney is presently a joint owner and titleholder to the Kinney Patent Application, with Lipton and Plourde, both of whom have assigned their rights to Secured.

39. Lipton, Plourde and Secured presently have no duty to inform Kinney of their use or license of the Kinney Patent Application, or to compensate him in any way.
40. Only after discovering the fraud, and while preparing for the trial before Chief Judge McMahon, did Kinney fully confirm that Lipton and Plourde contributed nothing to the claims in the Kinney Patent Application. Neither conceived any of the ideas, or reduced any invention described in the application to practice.
41. In the prior trial, Kinney produced over 100 pages of documents, notes, emails, drawings and schematics corroborating his contributions to the inventions and to the claims.
42. Lipton and Plourde could not produce a single document, note, email, drawing or schematic, or any other corroborating evidence produced by them, which contains, or even mentions any contribution they made to the inventions, claims or reduction to practice.
43. Lipton testified that no such documents, authored by himself or Plourde, exist.
44. Mr. Moskowitz testified at trial that he recalled that Lipton and Plourde orally contributed ideas to the claims in the Kinney Patent Application.
45. Kinney asserts that Lipton and Plourde could only have been reiterating Kinney's inventions to Mr. Moskowitz. Believing that he was 12.25% owner of Secured, Kinney had explained his inventions to Lipton and Plourde in great detail.
46. Mr. Moskowitz had no way to know that Lipton and Plourde were simply reiterating Kinney's original concepts.
47. Only Kinney reduced to practice the inventions in the Kinney Patent Application, by drafting the claims in layman terms, describing the inventions in detail, documenting the processes, and personally drawing the original version of every schematic later included in the Kinney Patent Application.

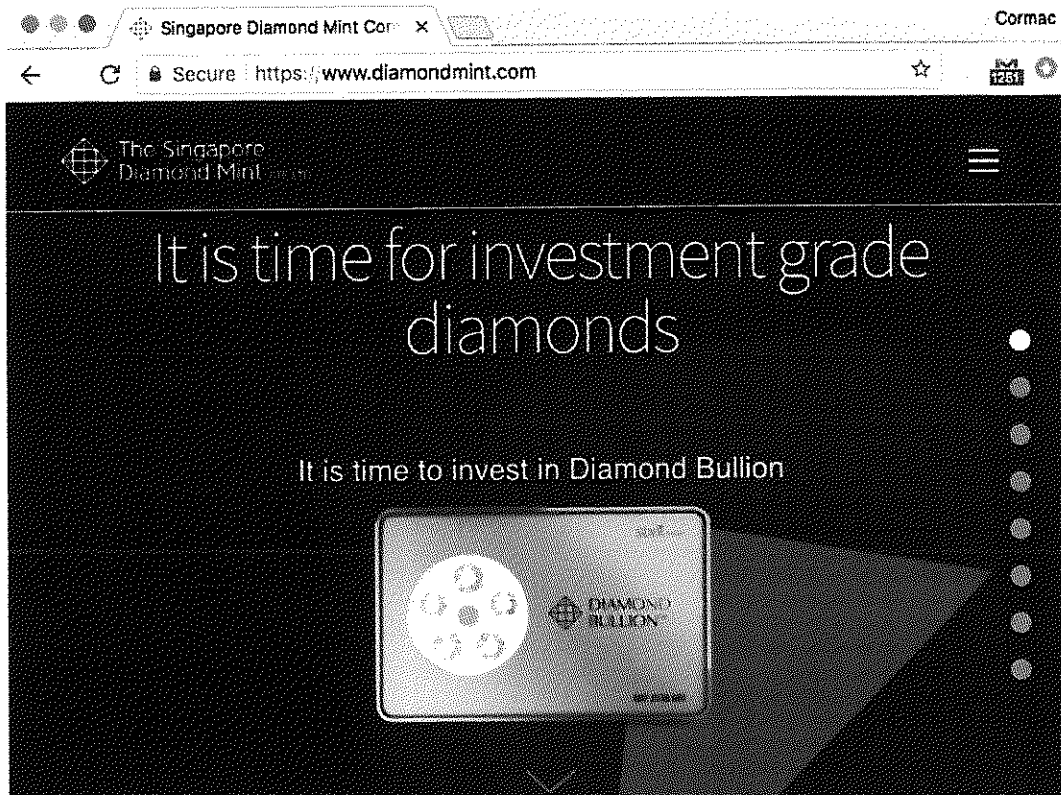
48. In early 2015, when Kinney discovered Lipton's fraud, he informed Mr. Moskowitz.
49. Yet on February 11, 2015, Mr. Moskowitz instructed Kinney to sign an amended patent application, which continued to list Lipton and Plourde as joint inventors, and to assign his rights to Secured.
50. Mr. Moskowitz explained to Kinney that the rights and benefits of the Kinney Patent Application could be lost if Kinney did not comply
51. Nonetheless, this time Kinney refused to sign the amended patent application, due to the false listing of Lipton and Plourde as joint inventors.
52. Before discovering the fraud, Kinney believed the actions, statements, representations and assurances of Lipton, Plourde and Mr. Moskowitz, and was led to believe (a) that it was proper for Lipton and Plourde to be listed as joint inventors to the Kinney Patent Application despite them not having contributed anything, (b) that if he did not sign the application as instructed, his rights to the Kinney Patent Application would be lost, and (c) that if he did not sign the application and assignment as instructed, the value of his 12.25% ownership in Secured would be lost.
53. Kinney was intentionally and fraudulently misled by Lipton into signing the oath, declaration and assignment, through Lipton's fraudulent inducement and fraudulent omissions, with assistance of Plourde, all found as fact by Chief Judge McMahon.
54. Upon information and belief, using the trade secrets disclosed by Kinney, and the intellectual property in the Kinney Patent Application, Secured has raised capital in an amount greater than \$10 million.

55. Using the trade secrets disclosed by Kinney, and the intellectual property in the Kinney Patent Application, Secured has launched commercial products known as VULT, and more recently Diamond Bullion.



56. Upon information and belief, the sales of the Secured products exceed \$10 million in the United States, and \$20 million worldwide.

57. In March 2017, Secured assigned a security interest in the Kinney Patent Application to Elihu Corp of Malaysia, for use by the Singapore Diamond Mint PTE LTD.



58. Upon information and belief, the value of this assignment and license exceeds \$10 million.
59. In August 2017, Gemshares LLC sued Lipton and Secured in the United States District Court for the Northern District of Illinois, Eastern District, in case 17-cv-6221.
60. Gemshares LLC is demanding as damages to receive Lipton's and Secured's rights to the Kinney Patent Application. Chief Judge McMahon has previously found as fact many of the central claims now made by Gemshares.

COUNT 1

61. Plaintiff re-alleges and incorporates by reference paragraphs 1-60, as though set forth herein in full.
62. Kinney is the sole inventor of the subject matter disclosed and claimed in the Kinney Patent Application, and Lipton and Plourde are falsely identified as joint inventors.
63. Lipton and Plourde are not inventors of the subject matter disclosed and claimed in the Kinney Patent Application.
64. As the sole inventor of the Kinney Patent Application, Kinney is the owner, and sole equitable titleholder of the Kinney Patent Application.
65. By virtue of not being inventors of the Kinney Patent Application, Plourde's and Lipton's assignments to Secured, are null and void.
66. The failure of Kinney to be identified as the sole inventor of the subject matter disclosed and claimed in the Kinney Patent Application occurred without deception or fraud on the part of Kinney.
67. The cause of Lipton and Plourde to be falsely identified as the inventors of the subject matter disclosed and claimed in the Kinney Patent Application occurred with deception and fraud by Lipton, and intentional concealment of the fraud by Plourde.

68. In order for the Kinney Patent Application to remain valid and enforceable, it must be corrected pursuant to 35 U.S.C. § 256 to identify Kinney as the sole inventor.
69. The assignment of the Kinney Patent Application, by Lipton and Plourde to Secured, and the granting of a security interest by Secured to third parties, must all be rescinded.

COUNT 2

UNJUST ENRICHMENT/CONSTRUCTIVE TRUST

70. Plaintiff re-alleges and incorporates by reference paragraphs 1-69, as though set forth herein in full.
71. By reason of the above-alleged wrongful acts and/or omissions, by falsely claiming to be inventors, Lipton and Plourde, and through their assignment to Secured, Secured, have been unjustly enriched at Kinney's expense, in an amount to be determined at trial. Defendants' continued retention of such unjust enrichment violates fundamental principles of justice, equity and good conscience.
72. Upon correction of the inventorship requested in Count 1, defendants' unjust enrichment will have been, and will continue to be, at Kinney's expense, as he had not received any financial proceeds or other commercial benefits or advantages commensurate with his diamond packaging and authentication research and development work, and/or his invention and ownership of the Kinney Patent Application.
73. It is unjust for defendants, jointly or individually, to retain any proceeds and other commercial benefits and advantages they derived, from Kinney's diamond packaging and authentication research and development work, including his invention of the subject matter in the Kinney Patent Application, and any related foreign patents and applications.

74. Defendants' unjust enrichment, in an amount to be proven at trial, should be disgorged from the defendants and awarded to Kinney.
75. By virtue of his ownership of the Kinney Patent Application, Kinney is entitled to a constructive trust upon exclusive title, as well as upon any monies and/or benefits defendants have derived or will derive from Kinney's diamond packaging and authentication research and development work, including the inventions in the Kinney Patent Application and any related foreign patents and patent applications, and the related trade secrets.
76. The Kinney Patent Application and any related foreign patents and applications must be corrected to name Kinney as the sole inventor, owner and equitable titleholder.
77. Any assignment by Lipton and Plourde of the Kinney Patent Application, and any related foreign patents and applications, to any entity, must be rescinded.
78. Kinney has invested his labor, skill, name and reputation in researching and developing his diamond packaging and authentication process, including the subject matter in the Kinney Patent Application.
79. Defendants, separately or jointly, have knowingly and wrongfully appropriated the fruits of Kinney's investment and work, including the Kinney Patent Application and any related foreign patents and applications.
80. Defendants have acted, and continue to act, in bad faith, grossly and wantonly, to their benefit and to the detriment of Kinney. Such conduct was, and is, without just cause or any basis in law or equity.
81. Upon information and belief, Defendants wrongful conduct, separately or jointly, was willful, malicious and egregious, and an award of compensatory and punitive damages and attorneys' fees is appropriate.

82. Upon information and belief, Secured unjustly received, or will receive, monies and benefits relating to the Kinney Patent Application, and any related foreign patents and applications,
- a. from sales of Vult and Diamond Bullion, or related products and services, in an amount to be determined at trial, but believed to be in excess of \$10 million in the United States and an additional \$10 million worldwide; and
 - b. from the license to the Singapore Diamond Exchange and to other entities, in an amount to be determined at trial, but believed to be in excess of \$5 million.
83. Upon information and belief, Lipton and Plourde unjustly received, or will receive, monies and benefits relating to the Kinney Patent Application and any related foreign patents and applications,
- a. from the increase in the value of their ownership of Secured, and any disbursements, from the capital raised from investors, in an amount to be determined at trial, but believed to be in excess of \$20 million;
 - b. from salary income funded by investments in Secured, which were predicated upon Secured's ability to exploit Kinney's trade secrets and the Kinney Patent Application;
 - c. from sales of Vult and Diamond Bullion, in an amount to be determined at trial;
 - d. from licenses or partnerships with the Singapore Diamond Exchange and other entities, in an amount to be determined at trial, but believed to be in excess of \$10 million.

WHEREFORE, the Plaintiff, Cormac L. Kinney, respectfully requests of the Honorable Court the following relief:

1. An order of correction naming Kinney as the sole inventor, owner and equitable titleholder of the Kinney Patent Application and any related foreign patents and applications;

2. An order rescinding any assignment of the Kinney Patent Application, and any related foreign patents and applications, by Lipton and/or Plourde, to Secured or any entity;
3. Monetary damages in an amount to be determined at trial, together with pre-judgement and post-judgement interest on such damages;
4. An order for establishment of a constructive trust *pendente lite* for all monies to be paid by defendants;
5. An order granting a permanent injunction against Lipton, Plourde, Secured, and any acting in concert with them, precluding the manufacture, use, offer for sale, sale and/or importation of any other product incorporating Kinney's trade secrets or intellectual property in the Kinney Patent Application, including Vult and Diamond Bullion;
6. Punitive damages;
7. Attorneys' fees, costs and interest; and
8. Any and all other monetary or equitable relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiff Cormac L. Kinney demands a trial by jury of all matters triable by right to a jury.

January 16, 2018

New York, NY

Respectfully,

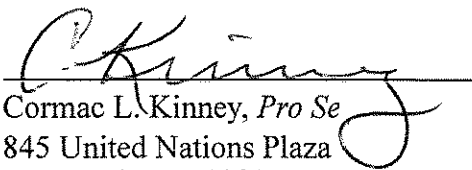

Cormac L. Kinney, *Pro Se*
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917-676-6312
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EXHIBIT 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

USDC SDNY
DOCUMENT
ELECTRONICALLY FILED
DOC #:
DATE FILED: 12/15/16

SECURED WORLDWIDE, LLC,

Plaintiff-Counterclaim Defendant,

-against-

15 Civ. 1761 (CM)

CORMAC L. KINNEY,

Defendant-Counterclaim Plaintiff.

CORMAC L. KINNEY,

Third Party Plaintiff,

-against-

ARTHUR JOSEPH LIPTON,

Third Party Defendant.

McMahon, C.J.:

The Court, for its findings of fact, conclusions of law, and verdict:

Findings of Fact

Background Facts

1. Secured Worldwide, LLC ("Secured Worldwide") is a Delaware limited liability company. Its founding and managing member is A. Joseph Lipton ("Lipton"). (Tr. at 42:3-4, 49:14.)

2. Secured Worldwide's consumer product, known by the trade name "Vault," consists of "a container and diamonds inside that form the product itself. . . . It is sort of the equivalent of a portable vault, hence the name. It is a way that someone can reliably buy diamonds in a relatively untrustworthy market. . . . It represents a method of transferring value

where authenticity can be confirmed.” (Tr. at 42:15, 46:3-24.) Secured Worldwide was initially going to do business in Asia and intended to expand globally thereafter. (Tr. at 47:5-7.)

3. The original Class A shareholders of Secured Worldwide were Lipton, Defendant-Counterclaim Plaintiff Cormac Kinney (“Kinney”), Joseph Plourde (“Plourde”), and Mark Lieberman (“Lieberman”). The original Class A shareholders signed an LLC Agreement on or about February 1, 2014. (PX-25.)

4. Lipton originally held a 51% interest in Secured Worldwide; the other three shareholders each held a 12.25% interest. (PX-25 at Schedule I.) The remaining 12.25% interest in the Class A shares was eventually split among Eshed (no other name provided), Abhay Javeri, and Kenneth Sitomer, who invested \$530,625, \$15,312.50, and \$15,312.50, respectively. These investments are memorialized in an Amended and Restated LLC Agreement, which was signed in or about July 2014. (PX-5 and Schedule I thereto.)

5. Among other things, the Amended and Restated LLC Agreement caused the formation of the LLC (partnership) to date back to an effective date of November 20, 2013. (PX-5 at 1.)

Kinney’s Capital

6. Kinney was required by the terms of the LLC Agreement and the Amended and Restated LLC Agreement to make a capital contribution as provided in Schedule I to the Agreements. (PX-5 at 6; PX-25 at 6.) Schedule I provides that Kinney’s capital contribution was to be \$61,250. (PX-5 at 33; PX-25 at 34.) The term “Capital Contribution” is defined in the body of the agreement as “cash, property, services rendered, note or other binding unconditional obligation to contribute cash or property or perform services for the Company by each Member in his, her or its capacity as a Member *pursuant to the terms of this Agreement.*” (PX-5 at 2; PX-25 at 2 (emphasis added).) However, the nature and amount of each party’s capital contribution is set forth in Schedule I to the Agreements; Section 4.1 of both the original and Amended and Restated LLC Agreements provides that, “With respect to each Member, their respective . . . Capital Contributions are set forth opposite each of their respective names on *Schedule I* Upon execution of this Agreement, each Member shall contribute his, . . . her [or its] . . . Capital Contribution to the Company.” (PX-5 and PX-25, Section 4.1 (emphasis added).) Schedule I to both the original and Amended and Restated LLC Agreements expressly provides that Kinney’s capital contribution is to be made in cash – to wit, \$61,250. Schedule I does not indicate that this obligation can be satisfied with anything other than cash. (See PX-5 at 33; PX-25 at 34; Tr. at 54:2-57:22.) Put otherwise, the terms of the LLC Agreement and the Amended and Restated LLC Agreement do not provide that Kinney’s capital contribution could be made in any manner other than as set forth in Schedule I, and Schedule I says that Kinney was required to contribute cash in order to become a member of the LLC. (PX-5 at 33; PX-25 at 34.)

7. While Kinney never put any cash into the venture, the other Class A members of Secured Worldwide treated Kinney as a partner and held him out to the world as a partner throughout their year and a half of association – even as they repeatedly deferred Kinney’s obligation to make his capital contribution to the LLC. (*See* Tr. at 118:14-15, 119:2-9, 125:22-126:4; DX-43.) However, there is no credible evidence that the other Class A members agreed to excuse Kinney from making a capital contribution in cash. In PX-40, for example, Lipton demanded that Kinney write a check for his capital (a demand that would not have been necessary if Kinney had been permitted to contribute intellectual property in lieu of cash in exchange for his partnership share). Lipton offered to hold onto a check from Kinney for a while if Kinney was having difficulty paying – but the demand for cash was always there. (*See* PX-40; Tr. at 54:22-57:24, 371:21-374:20.) There is no evidence that, prior to this lawsuit, Kinney ever responded to this demand by protesting that he had already made his capital contribution. (*See* Tr. at 57:17-24, 371:21-374:20.)

8. Kinney never made his capital contribution to Secured Worldwide. (Tr. at 53:25-54:1.)

Secured Worldwide’s Product and its Background

9. The product contemplated by Secured Worldwide consisted of a basket of diamonds encased in some sort of casing, which could be sold to investors. These Vults, as they came to be known, were to be created in multiple denominations, each of which would contain a “basket” of diamonds of roughly equal value (the Blue Vult would contain, say \$5,000 worth of diamonds; the Yellow Vult would contain \$10,000; the Red Vult would contain \$25,000 – these are examples of the concept, not actual products created by Secured Worldwide). (Tr. at 42:9-11, 44:1-11, 44:18-21, 45:1-10, 45:15-19, 46:1-8.)

10. Sometime during August 2013, Lipton introduced Kinney to Victor Feldman (“Feldman”), the managing partner of an LLC called GemShares, in which Lipton held a 10% interest. (*See* DX-2; DX-3; Tr. at 68:15-21, 134:7-14.) GemShares held a patent (U.S. Patent No. 8,239,211) on a “process to create a fungible global standard for diamonds and gemstones . . . [involving] grouping diamonds in an investment standard according to their gemological, proportional, optical and light behavior characteristics” – in essence, a process for sorting diamonds of various sizes, shapes, and quality into “baskets” of roughly equal value. (DX-1.) Although GemShares’ patent contemplated the possibility of a commercial product, GemShares itself was interested primarily, if not exclusively, in creating a financial product that could be traded on exchanges – not a physical product that could be sold to consumers as an investment-type item (*à la* Kruggerands). (Tr. at 419:9-19.) Lipton was interested in seeing GemShares develop a commercial product, which is why he introduced Kinney to Feldman. (*See* Tr. at 497:24-498:5, 537:23-538:10, 538:21-539:15; DX-19.)

11. Kinney and GemShares discussed certain ideas (“the intellectual property”) relating to a method for packaging equal baskets of diamonds – a sort of mini-“vault” – which

could then be traded on the financial markets or sold to the consuming public. (See Tr. at 134:15-138:14, 409:11-410:3.) Prior to holding discussions, they signed a Non-Disclosure Agreement (DX-3), which provided, *inter alia*, that Kinney's intellectual property would remain his property unless GemShares did a deal with Kinney, and vice versa.

12. During their discussions, Kinney, through Lipton, proposed terms for an associational arrangement between him and GemShares. (DX-4.) Feldman, however, had no interest in Kinney's ideas – he did not believe that they contained anything new – and while Lipton forwarded Kinney's proposals to Feldman, GemShares did not enter into any arrangement with Kinney. (See Tr. at 361:9-18, 363:7-15.)

13. Lipton continued to be interested in creating a commercial product along the lines of what Kinney had proposed to GemShares. During the fall of 2013, Lipton had been “silently working” on developing the contours of the business that would become Secured Worldwide. (DX-21.) He also had discussions with Feldman about structuring a joint venture of some sort between him and GemShares. But Feldman's proposal – essentially a suggestion that the existing company be “split” in two, and that Lipton “pay in capital” in the spun-off company “for a license fee” (DX-26) – was not acceptable to Lipton, who wanted to form “a completely independent licensed commercial product company under acceptable terms.” (DX-26.) Lipton had already decided that he could not work with Feldman and his people; despite his being a limited partner in GemShares, his goal was to “walk away” from it in favor of his own independent enterprise. (DX-21.)

14. Lipton wanted Kinney to come with him, and Kinney decided to cast his lot with Lipton's new venture in or about November or December 2013. (See Tr. at 416:19-21; DX-15; DX-21; PX-5.) At or about the time he decided to join Secured Worldwide, Kinney also quit his job with Newscorp. (Tr. at 64:5-7, 441:2-3, 442:8-9.) Kinney had been employed at Newscorp at an annual salary of \$500,000 – although, by his own admission, things were not going well there, and he was being “screwed” by Rupert Murdoch. (Tr. at 189:19-190:6; PX-45.)

Lipton and GemShares Cannot Agree on License Terms

15. On December 12, 2013, Lipton emailed Plourde and Lieberman a copy of a letter that Lipton had sent to the GemShares partners. (DX-26.) Lipton wrote: “Jay and Mark, You may recall that I expected Vic and Co to come back to me with a request for what I wanted after my rejection of their proposal. Yesterday afternoon Vic asked me to provide exactly that. *Please keep this between us three. J.*” (DX-26 (emphasis added).) The email expressly stated that Lipton's proposed company would be a “licensed commercial product company.” (DX-26.) The terms and overall tenor of DX-26 indicate that no deal had been put in place at the time it was written – which means that no such license was in place at the time the email was written.

16. Apparently the recipients of Lipton's message about secrecy took it to heart, because no one told Kinney – their intended partner – that Secured Worldwide did not have a

license from GemShares, or that GemShares had taken the position that it needed such a license (a position with which Kinney would have agreed, see *infra*).

17. After Lipton sent the email (DX-26) to two but not three of his proposed partners, the Class A shareholders entered into the LLC Agreement, on or about February 1, 2014. (PX-25.)

The Patent Application and Assignment

18. While the original LLC Agreement was being drafted (PX-25), a patent lawyer named Max Moskowitz (“Moskowitz”) started preparing a provisional patent application. That application was eventually filed on or about February 12, 2014. (Tr. at 201:13-17; PX-14.) It claimed an invention for “SECURE DIAMOND SMART CARDS AND EXCHANGE SYSTEMS THEREFOR.” (PX-14.)

19. The patent application listed three co-inventors: Kinney, Lipton, and Plourde. (Tr. at 204:3-4; PX-14.) That said, the technology described in the patent application was essentially Kinney’s brainchild – although the idea for the commercial product that Kinney’s technology was supposed to bring to life came from Lipton. Plourde’s contribution consisted of “creating . . . an ecosystem around the product itself” and helping to create the “aftermarket for the product.” (Tr. at 378:11-379:23.)

20. Originally, the inventors were to be Kinney and Lipton alone; Plourde actually did not want to be listed as an inventor. (See DX-34.) Through due diligence interviews, Moskowitz assessed the contributions of the various partners in Secured Worldwide and decided which members should (and should not) be listed as inventors. No one other than Moskowitz made this decision. (Tr. at 200:13-210:15.)

21. Each of the listed inventors (including Kinney) was asked to, and did, assign all of his rights, title, and interest in the invention described in the patent application to Secured Worldwide. (PX-16.)

22. The assignment was signed more or less at the same time as the original LLC Agreement and was part and parcel of putting together the Secured Worldwide operation. (PX-16; PX-25; Tr. at 211:22-213:8.)

Kinney’s Employment Proposals

23. From the time he left his job at Newscorp, Kinney worked for Secured Worldwide. He did not obtain other employment. That was his own decision; no one prevented Kinney from obtaining other employment. (See Tr. at 64:8-10.) Kinney set up a lab (at Secured Worldwide’s expense) to experiment with resins for the “puck” that was to hold the “basket” of diamonds. (See Tr. at 444:1-9.) Kinney also created specifications and prototypes for computer

programs that would create sets of diamonds. He took those programs and delivered them to Industrial Algorithms, who rewrote them in “a[n] industrial program,” which was subsequently copyrighted. (Tr. at 415:14-416:13; PX-3; PX-27.)

24. Throughout the year or so when his only work was for Secured Worldwide, Kinney repeatedly demanded money to compensate him for what he perceived as his value to the LLC. Lipton repeatedly resisted those demands. (See Tr. at 444:10-21.)

25. In November 2013, which was before he left Newscorp, Kinney wrote to Lipton that he would “dedicate a full weekday every week to the projects.” (DX-16.) In that email, Kinney directed Lipton to “[l]et [him] know if [he had] thought about the structure,” referring to what Kinney believed to be the structure of the equity that Lipton had promised him. (DX-16; Tr. at 426:4-11.) Kinney believed that he “had separately agreed to work for additional sweat equity based on [his] market value” (Tr. at 426:21-23) and also believed that he and Lipton had “agreed to work out the details later.” (Tr. at 425:25.) Lipton never responded to this proposal and Kinney’s belief was just that – a belief, not a contract.

26. Kinney testified that, in February 2014, Lipton “proposed to pay [Kinney] a mix of stock and cash with the cash after he raised more money This was the final part of the sweat equity agreement [the two] had made in November [2013], *but [they] hadn’t finalized the details which was [Kinney’s] market rate.*” (Tr. at 441:10-14 (emphasis added).) Obviously, Kinney’s “market rate” was a material contract term that could not be left to later agreement. Lipton also allegedly “promised that whenever [Kinney] was working for less than \$650,000 in cash, [he] would be earning stock.” (Tr. at 441:19-22.) In fact, the only thing that really happened in February 2014 is that Kinney signed the LLC Agreement, which assigned him a fixed share in the new venture; obligated him to contribute capital thereto; and forbade him from entering into any sort of employment arrangement with Secured Worldwide without Board approval. (PX-25 and PX-5, Section 6.12.)

27. From the outset, Kinney and Lipton were at cross purposes about Kinney’s participation in Secured Worldwide. Lipton’s vision was that of a start-up investor: he planned to raise capital from outside investors, manufacture and promote his product, and achieve his return from the increase in the value of his investment, not from a salary. (See Tr. at 95:16-21, 268:15-269:4, 369:17-370:10, 370:15-25, 483:3-6.) There is no credible evidence that Lipton ever agreed to the terms outlined in Paragraph 26; there is no writing signed by the party to be charged obligating Secured Worldwide to employ Kinney on the terms he proposed, and there is no evidence that Secured Worldwide ever paid Kinney a dime under this proposed arrangement. To the extent that Kinney testified that Lipton agreed orally to this proposal, I do not credit his testimony.

28. Kinney’s testimony that his continuing to work was evidence that Lipton had, in fact, agreed to his proposal that he earn cash or additional “sweat equity” stock in Secured Worldwide is not persuasive. (See Tr. at 442:8-13, 444:10-21.) Kinney’s principal failing as a

businessman is his tendency to assume that people agree with him even when they do nothing to manifest assent to his proposals. Silence, in business dealings, is not consent. *See Metro. Enters. N.Y. v. Khan Enter. Constr., Inc.*, 1 N.Y.S.3d 328, 329 (2d Dep't 2015) ("To create a binding contract, there must be a meeting of the minds as to the material terms of the agreement. Stated differently, 'there must be a manifestation of mutual assent sufficiently definite to assure that the parties are truly in agreement with respect to all material terms.'"); *Diarassouba v. Urban*, 892 N.Y.S.2d 410, 415 (2d Dep't 2009) ("In order to produce a legal contract, there must be an actual acceptance. Such acceptance must be clear and unequivocal and thus, cannot be ambiguous, as was the alleged assent involved here. As such, a silence which breeds ambiguity cannot constitute acceptance."). Lipton was "working" for Secured Worldwide without compensation in the hope that his investment of time and money would someday pay off – the classic entrepreneur. Since Kinney continued to work for Secured Worldwide without obtaining any firm commitment for interim compensation or a further equity stake in the business, Lipton had every reason to assume that Kinney was doing the same – even if that was not Kinney's preference. (*See* Tr. at 58:17-21, 59:17-19, 60:12-16, 370:4-10.) Lipton's testimony that he did not do anything to prevent Kinney from obtaining remunerative employment is credible; his acceptance of Kinney's services on a non-remunerative basis is consistent with their joint status as partners in a start-up. (*See* Tr. at 64:8-10.)

29. Lipton's decision simply to ignore Kinney's demand also made sense in light of the fact that Section 6.12(c) of the LLC Agreement precluded the members (including Kinney) from being employed by the company except in limited circumstances: "The *Board* may choose to cause the Company to employ Members or Managers as employees of the Company, in exchange for such compensation *as shall be agreed between the Board and such other Member or Manager*. Such employment shall be at an at-will employment unless the parties agree otherwise." (PX-25 at 16 (emphasis added).) Kinney's proposal for an employment contract was never submitted to the members for a vote. While it is true that Lipton alone could have passed the measure with his 51% interest, the fact that he did not submit the proposal for Board consideration or place any indication of the purported agreement on the corporate record is further evidence that Kinney's proposal was never accepted. (*See* Tr. at 343:12-21.)¹

Kinney Learns that GemShares Has Not Licensed Secured Worldwide

30. Secured Worldwide hoped to roll out the first iteration of its commercial product in or about the third quarter of 2014. (*See* DX-19.)

31. As noted above, GemShares had not given Lipton permission to create a commercial product using its patented algorithm to create "baskets" of diamonds of roughly equal value. However, at or about the time he decided to join Secured Worldwide, Kinney saw two documents that caused him to believe that Secured Worldwide had GemShares' permission

¹ Section 6.12(c) remains relevant, despite the fact that the Court is ordering rescission of the LLC Agreement, because it goes to Lipton's state of mind at the time the "employment contract" was allegedly formed.

to pursue the creation of a commercial product consisting of “vaults” of diamonds of roughly equal value.

32. The first, DX-9, is an email from Lipton to Kinney discussing the launch by “NewCo, a licensee of GemShares” of a “new three-stone GIGS Diamond Basket directly to consumers.” It is perfectly obvious that the “NewCo” referred to in the email became Secured Worldwide, and Lipton’s testimony to the contrary is utterly and entirely incredible. (*See* Tr. at 142:21-144:15.) In this email, Lipton specifically advised Kinney that Secured Worldwide would be using the “GemShares patented process for fungibility” to create its commercial product, and stated that NewCo would be “the licensed commercial product company.” (DX-9.)

33. The second, DX-19, is a draft press release from “Secure^D Worldwide,” detailing the launch of “a new three-stone investment diamond product for limited sale beginning 3Q2014.” The press release notes that “Secure^D is an authorized global licensee of GemShares patented IP and proprietary GIGS Diamond technology.” (DX-19.) Lipton described this press release as a draft, but whether it was or was not does not matter, since it asserts a fact that was manifestly not true. (*See* Tr. at 144:16-146:14.)

34. Kinney did, in fact, believe that Lipton needed a license from GemShares to create his contemplated commercial product. (Tr. at 410:4-9, 420:19-21, 421:1-6, 421:9-13.) And Kinney had good reason for his belief. As a result of his talks with Feldman, Kinney was familiar with the GemShares patent. As described to the Court, the contemplated commercial product required the sorting of diamonds into separate groups of roughly equal value. (Tr. at 46:18-25, 409:20-410:7.) That is precisely what the process patented by GemShares did, and Kinney knew as much. (DX-1.) Indeed, the credible evidence suggests that Lipton had tried to interest Feldman in using the GemShares process to create a commercial product in addition to a financial product; and Kinney was introduced to Feldman because his ideas – for encasing diamonds in a resin “puck,” for example – could be used to create both products. (*See* Tr. at 497:24-498:5, 501:6-502:4, 502:20-22.) As noted above, in December 2013, Lipton himself described his proposed new company to Feldman of GemShares as a “completely independent *licensed* commercial product company” (DX-26 (emphasis added)) – thereby admitting that a license was required for the venture.

35. The credible evidence, therefore, establishes that Lipton intended to use GemShares’ patented process to sort the diamonds into baskets, and then incorporate Kinney’s technological ideas to create a finished product that could be sold. Lipton’s testimony that he did not need a patent license because there would be no competition between his commercial product and GemShares’ financial product (*see* Tr. at 537:18-538:10, 540:19-24) is utterly and completely incredible, as well as entirely at variance with patent law.

36. There is an additional reason why Lipton needed GemShares’ permission to proceed with his commercial venture. The GemShares LLC Agreement provided that members could not “engage in, acquire, or own any interest in, or assist any person who or which, directly

or indirectly through any other person, engages in any business, enterprise, trade, profession or employment that is competitive with [GemShares] and is related to any Gemstone Financial Product” – a term defined as “any product, service or business enterprise *that utilizes, in whole or in part, the Patent Interest of the Company.*” (DX-2 (emphasis added).) “Gemstone Financial Products” were “created by securitizing, equitizing, and monetizing gemstones . . . into the exchange traded environment.” (DX-2 at 7.) “[A]ny product, service or business enterprise that utilizes in whole or in part, the Patent Interest of [GemShares] . . . shall constitute a Gemstone Financial Product under the terms of this Agreement, including protection from unauthorized and unlicensed use and competition.” (DX-2 at 7.) The proposed Secured Worldwide Vult meets the DX-2 definition of a Gemstone Financial Product. Therefore, Lipton could not produce it without obtaining the permission of his former partners, and Lipton’s testimony to the contrary is utterly and completely incredible.²

37. Nonetheless, Lipton decided to go ahead with his commercial venture (now named Secured Worldwide) without obtaining GemShares’ consent.

38. On October 22, 2014, a lawyer representing GemShares – Bob Rigg (“Rigg”) of Vedder Price – sent Lipton a “shot across the bow” email, regarding the “recent conversations [Lipton] had with Vic Feldman regarding Secured Worldwide LLC.” (DX-81.) Rigg noted that Lipton “mentioned to Vic that GemShares and Secured Worldwide LLC would work out a participation agreement” regarding “the commercial product concept from GemShares.” (DX-81.)

39. At this point, Lipton could no longer keep from Kinney the fact that he had a difference of opinion with GemShares about whether he needed Feldman’s permission to manufacture and market the Vult. Lipton forwarded Rigg’s email to Kinney on October 27, 2014, noting, “This is the background.” (DX-81.) This represented the “very first time” that Kinney learned there was such a dispute and that Secured Worldwide held no license from GemShares. (Tr. at 445:24-446:3.) This email does not sound like it was being sent to someone who was already aware of the fact that Feldman and Lipton were in a dispute over Secured Worldwide’s ability to manufacture and market its commercial product. To the extent that Lipton testified that Kinney was aware, prior to October 2014, of the fact that Secured Worldwide had no license from GemShares, I find his testimony entirely incredible and I reject it.

40. I also reject the argument that Kinney could have obtained the information about a license directly from Feldman. Regardless of Feldman’s assertion that Kinney was his “friend” (Tr. at 321:24-25) – a statement the Court interprets as meaning only that Feldman is not hostile to Kinney – the credible evidence supports Kinney’s assertions that he met Feldman just once,

² There is no evidence in the record that Kinney was aware of the terms of the GemShares LLC Agreement at any relevant time prior to the commencement of this lawsuit. Therefore, it could not have affected his thinking on the matter one way or the other. Lipton knew about it, however, and I cite it as evidence that Lipton was lying when he testified that he did not need a license for his commercial product.

lived and worked 800 miles away from where Feldman lived and worked, and had no regular communication with Feldman on any subject. Kinney's contact with GemShares was Lipton, whom he had known for many years – not Feldman. (See Tr. at 49:9-11, 61:15-19.) If Lipton told him something about GemShares, Kinney would have had no reason to doubt it; similarly, Kinney had no reason to go behind Lipton's back, to a person he barely knew, in order to obtain assurances that information was not being kept from him by his long-time acquaintance. (See Tr. at 411:5-8.)

41. Over time, Kinney reacted to Lipton's disclosure in two ways. At first, he was defensive: Kinney asserted that Rigg's characterization of the "commercial product concept from GemShares" was "problematic" and needed to be rebutted, because "[s]tatements that are not proactively challenged can be deemed to be accepted." (PX-34.) And when Lipton indicated a desire to litigate rather than conciliate, Kinney joined his aggressive posture, writing on November 4, 2014: "Overall, I don't think we should feel obligated to bend over backwards to any degree. Only if there is a mutually beneficial collaboration, could this be worthwhile. I don't believe any free equity is warranted or fair. They have not contributed value to us to deserve equity. Merely removing the risk of a lawsuit is just paying blackmail. . . . If they want to move towards the litigation path, that could be our next chess move – grabbing them by the balls and squeezing hard." (PX-36.)

42. But Kinney also believed that GemShares actually had to license Secured Worldwide to use the algorithm that would sort the diamonds into roughly equivalent "baskets." Kinney sent the Secured Worldwide co-founders an email with an attached photo that outlined his proposals to resolve the dispute. (DX-83.) At a meeting with his partners, Kinney suggested asking GemShares to grant Secured Worldwide an exclusive license for retail and consumer applications with a proposed \$5 million royalty payment. (Tr. at 446:20-23.) Next, he proposed that Secured Worldwide would license to GemShares the optimization software Secured Worldwide had created and later copyrighted. (Tr. at 446:24-25.) Kinney also suggested that Secured Worldwide should receive the rights to use the pricing that GemShares was displaying on NASDAQ. (Tr. at 447:3-5.) Kinney proposed cross-licensing all the intellectual property and GemShares' patent. (Tr. at 447:6-8.) Kinney proposed giving "GemShares an equity option for 5% of the company." (Tr. at 447:9-10.) Finally, Kinney proposed merging their collective data systems. (Tr. at 447:11-13.) As with so many things, he could not get Lipton to agree to any of his suggestions; but Kinney's suggestions are not the work of someone who believes no license is necessary.

43. On December 1, 2014, Lipton received another "shot across the bow email," from John Sibrava ("Sibrava"), an attorney for GemShares. (DX-89.) In this formal complaint letter, Sibrava documented the "inherent conflict" that existed between Lipton and the remaining members of GemShares. (DX-89.) In this email, Sibrava observed that, "The concepts at the core of the Secured Global, LLC product are drawn from the work product generated by GemShares. Your planned launch and use of the product, even if independently developed, is clearly within the scope of the business of GemShares, which by your express agreement as a

member of GemShares, 'shall extend to and includes both Financial Trade and Commercial trade.' Clearly, the opportunity that presented itself to you is an opportunity to which GemShares is entitled. For those reasons, GemShares is also clearly entitled to participate, to a reasonable degree, in the revenue derived." (DX-89.)

Lipton Finally Agrees to Employment Terms

44. At about the same time, Kinney decided that he would not continue to work toward the rollout of Secured Worldwide's product without receiving cash compensation. Kinney demanded that he receive all his "future" compensation in cash, rather than stock. (Tr. at 449:8-18.) As usual, Lipton ignored him. Eventually, however, after Kinney said that he needed cash in order to pay for his children's private school tuition, Lipton agreed that Secured Worldwide would employ Kinney, effective November 1, 2014, on the basis that he would earn \$200,000 per year (\$7,692.31 in earnings and \$5,195.19 after taxes/deductions on a bi-weekly basis), and that Kinney would be paid \$75,000 – \$25,000 immediately and \$50,000 subsequently – to compensate him for the months of work he had already put into the project. (Tr. at 65:8-66:13, 250:22-25, 346:20-25, 449:13-14; PX-21; DX-96.)

45. Kinney was not paid until the pay period beginning November 22, 2014, but thereafter and until he left Secured Worldwide on March 5, 2015, he received a check every other week for \$5,195.19. Secured Worldwide also filed a W-2 for Kinney for 2014. (See PX-21; PX-22; Tr. at 345:12-346:19, 346:20-347:3.) His compensation is recorded on the books and records of Secured Worldwide.

46. Kinney also received an immediate payment of \$25,000 for previous work. (Tr. at 65:22-23, 451:21-22.) He was never paid the other \$50,000 that he was promised. In an email dated January 30, 2015 – which responded to a request from Kinney for payment of the \$50,000 – Scott Acker ("Acker"), Secured Worldwide's comptroller, told Kinney that Lipton "said not to pay the back pay yet. I can't pay it until he approves it. Please discuss it with him and have him send me an approval." Kinney forwarded this email to Lipton, asking him to approve it so he could "pay school deposits." Lipton replied by claiming that Secured Worldwide was "very short cash and [could not] take money from China. What is the minimum really?" Kinney responded by proposing "half, \$35k," to which Lipton replied that Secured Worldwide did "not have it." (DX-96; Tr. at 451:12-452:8.) In those emails, Lipton did not deny having promised the money to Kinney; in fact, it sounds very much like he was trying to defer paying some or all of the amount. The Court credits Kinney's testimony that Lipton did promise a total of \$75,000.

Kinney Severs Relations with Lipton and Secured Worldwide

47. Kinney and Lipton eventually came to blows over whether Secured Worldwide should produce both a high end and a lower priced ("utility") product – that is, both a Vult in which the diamonds were costly and of high quality and a Vult in which the diamonds were not costly and were of lesser quality – in order to appeal to different markets. (Tr. at 87:18-88:2.)

Lipton did not wish to go into the low-end market; Kinney did. (Tr. at 88:9-13.) Plourde thought Kinney's idea for a lower priced product was interesting, but advised that the company should not try to introduce products of two different values at the same time. (Tr. at 375:6-376:9.)

48. Kinney finally decided to do exactly what Lipton had done to GemShares: threaten to go it alone in the hope of achieving a partnership on terms acceptable to him. He prepared a "Draft Term Sheet" on or about February 24, 2015, in which he documented the terms of a proposed "license agreement" between Secured Worldwide and FastFourier, the company that Kinney was intending to launch for the purpose of capturing the utility vult market. (PX-7; Tr. at 299:15-18.) Kinney claimed that he would not pursue his new business "without a license agreement." (Tr. at 299:19-22, 300:4-11.)

49. After sending the "draft cooperation agreement," Kinney prepared a "summary" of his "legal position," which he presented to Moskowitz on or about February 23, 2015. (PX-19; Tr. at 292:8-11, 299:9-14.) Kinney prepared this document to "push the company to talk about a fair resolution . . . of the disagreement about whether [he] had actually worked for free an entire year and contributed all of [his] IP for free." (Tr. at 293:7-15.) In that document, Kinney asserted that "all intellectual property created by [him] before November 14, 2014, the earliest date of his compensation by Secured Worldwide LLC, is the exclusive property of Mr. Kinney." (PX-19.) "This includes those patent pending claims he invented, all technical product, platform and software designs, as well as the brand name 'vult,' which was coined and written by Mr. Kinney on June 30, 2014, gaining automatic copyright protection." (PX-19.) Kinney asserted that "any intellectual property [he] developed while employed, that is an extension to or based upon IP he developed prior to such timeframe, may not be used by Secured Worldwide, absent an agreement specifying the various rights and obligations of both parties." (PX-19.)

50. On or about March 5, 2015, Kinney wrote a letter to the Secured Worldwide Board of Directors, claiming that Lipton "has forced the company to run as a dictatorship" and that Kinney had "launched a company that [would] use [his] IP to manufacture and sell a utility VULT." (PX-11.) Kinney wrote that he "offered SWW equity and a free cross license." (PX-11.) Kinney then emailed Joe Rousseau, Secured Worldwide's Marketing Director, informing him that he had "decided to use the vult name for the overall product category, including the new utility vult." (PX-12; Tr. at 315:13-21.) Kinney remarked that he was "simply making shared use a non-negotiable condition of whatever deal [was made] for the overall IP license." (PX-12.)

51. Lipton refused to negotiate with Kinney.

52. Kinney never returned to Secured Worldwide's offices after March 5, 2015.

53. Between March 5 and March 10, 2015, Kinney, who was the webmaster for the Secured Worldwide web site, locked Secured Worldwide out of its own web page.

The Litigation

54. On March 10, 2015, Secured Worldwide sued Kinney and sought a preliminary injunction against: (1) his competition with the company; (2) his use of the company's trademarks, copyrighted software, and trade secrets; and (3) his interference with the company's web site. (Dkt. #1.) After a testimonial hearing, the Court granted the motion for a preliminary injunction on April 1, 2015. (Dkt. #35.)

55. After the injunction was entered, Kinney asserted counterclaims against Secured Worldwide and Lipton for rescission of the LLC Agreement(s) and the patent assignment that accompanied them, on the ground that he had been fraudulently induced to enter into those agreements because Lipton led him to believe that Secured Worldwide was a licensee of GemShares. (Dkt. #60.) Kinney also sought to enforce his employment agreement with Lipton.

Kinney's Equity in Secured Worldwide is Revoked

56. The Amended and Restated LLC Agreement provided that Class A members "shall be deemed to have forfeited their respective Class A Membership Interests in full in the event they fail to pay the purchase price for such Class A Membership Interest pursuant to the terms of such purchase agreement." (PX-5, Section 4.7(a).)

57. As noted above, Kinney had never made his capital contribution to the LLC as required by Schedule I. (*See supra* ¶ 8.)

58. On October 12, 2015, Lipton caused a letter to be sent to Kinney, which said that "[a]fter numerous demands for payment over the past two (2) years and several extensions of time granted to you by the Company, you have still not made the Cash Capital Contribution to the Company. By this letter, the Company makes a final demand for payment of the Cash Capital Contribution by 3:00 PM EDT on October 16, 2015 (the 'Final Payment Date'). If the Company has not received the Cash Capital Contribution from you in full by the Final Payment Date, the Company will cancel the CK Membership Interests, you will no longer own any Membership Interests or other interests in the Company and you will immediately cease to be a Member of the Company for all purposes." (PX-56.) Secured Worldwide thereafter terminated Kinney's membership. (*See* Tr. at 94:21-95:8.)

Subsequent Events

59. After Kinney left Secured Worldwide, it became apparent that the processes and products on which he was working did not work. (*See infra* ¶ 123.) This caused Secured Worldwide to contract with persons not party to this lawsuit to create workable products and processes and delayed the launch of the product by "about a year . . . after Mr. Kinney left." (Tr. at 382:13-383:6.)

Conclusions of Law and Findings of Ultimate Fact Relevant Thereto

Claim for Fraudulent Inducement/Rescission (Kinney)

60. Rescission of a contract that was fraudulently induced is warranted when a party is induced to enter into the contract by: (1) an affirmative misrepresentation of material fact, on which the party reasonably relies, or (2) an omission to disclose a fact, or the concealment of a fact, which fact would have been material to a reasonable person contemplating entry into such contract, by one with a duty to disclose. *See Banque Arabe et Internationale D'Investissement v. Maryland Nat'l Bank*, 850 F. Supp. 1199, 1212 (S.D.N.Y. 1994); *Barrett v. Freifeld*, 908 N.Y.S.2d 736, 737-38 (2d Dep't 2010); *Sokolow, Dunaud, Mercadier & Carreras LLP v. Lacher*, 747 N.Y.S.2d 441, 446-47 (1st Dep't 2002).

61. Lipton caused Kinney to believe that Secured Worldwide had a license from GemShares to manufacture and market the commercial product eventually known as "Vult." He affirmatively represented, in an email sent from him to Kinney, that NewCo (i.e., Secured Worldwide) would be a "licensed commercial product company" that would utilize the "GemShares patented process for fungibility" to create a commercial product that would be closely related to GemShares' financial product; he also represented that "the process to manufacture and support both commercial and financial products is almost identical." (DX-9.) He showed Kinney a draft of a press release designed for the "Secure^D Worldwide" product launch; it, too, represented that Secured Worldwide "is an authorized global licensee of GemShares patented IP and proprietary GIGS® Diamond technology." (DX-19.) But as early as December 2013 – just after Kinney joined forces with Lipton, but before the LLC Agreement and the patent assignment were signed – it became clear that GemShares had not yet licensed its patented technology to Secured Worldwide, and that there was no deal on the horizon for it to do so. Nonetheless, Lipton deliberately did not divulge that information to Kinney. He did, however, tell his other potential partners, Plourde and Lieberman, that he had turned down the terms on which GemShares had offered a license, and that GemShares had not agreed to any alternative proposal.

62. Kinney reasonably believed that a license from GemShares would be required to create the commercial product that Secured Worldwide contemplated producing. As admitted by Lipton in his email to Kinney, Secured Worldwide intended to use GemShares' patented process to create baskets of diamonds; that alone required a license from the patent holder, which was GemShares. Indeed, it appears that Kinney was introduced to Feldman by Lipton in order to get GemShares interested in creating, *inter alia*, a commercial product using its patented process and Kinney's engineering ideas. Lipton's testimony that no license would have been required is contradicted by his own contemporaneous statements and is entirely incredible.

63. Therefore, the absence of a license from GemShares was a material fact, the concealment of which would have mattered to a reasonable person who was contemplating

joining a limited liability company and giving up his rights in intellectual property to that limited liability company.

64. As one contemplating entering into a partnership with Kinney, Lipton had a duty to disclose the lack of a license to Kinney before Kinney signed the LLC Agreement and the patent assignment. *See Aaron Ferer & Sons Ltd. v. Chase Manhattan Bank, Nat'l Ass'n*, 731 F.2d 112, 122-23 (2d Cir. 1984); *Swersky v. Dreyer & Traub*, 643 N.Y.S.2d 33, 37 (1st Dep't 1996).

65. Kinney has proven by clear and convincing evidence that he was fraudulently induced (1) to enter into the LLC Agreement and (2) at or about the same time, to assign his interest in the invention that is the subject of U.S. Patent Application "US 2015/0223580 A1," and his interest in any patent that might issue thereon. (*See* DX-108.)

66. Kinney has elected rescission as his remedy of choice. Therefore, to the extent of his membership, the LLC Agreement (PX-5) is deemed rescinded; and to the extent of his assignment, the patent assignment (PX-16) is deemed rescinded.

67. The rescission of the contracts makes them void *ab initio* as to Kinney, and restores to him his ownership of the claimed invention and his interest in any patent that might issue thereon. *See Schwartz v. Nat'l Computer Corp.*, 345 N.Y.S.2d 579, 582 (1st Dep't 1973) ("It should be pointed out that to grant rescission is to declare the contract void from its inception and to put or restore the parties to status quo."). However, Kinney is correct that there is no way to "unscramble the eggs" entirely in this case. He worked for a year and more for modest compensation on the understanding that he was to be a partner in a joint venture, and in the expectation of a financial reward if the Vult were successful in the marketplace. And while much of the work he did appears to have been fruitless and needed to be redone (*see supra* ¶ 59), there is no way to assess how much (or how little) of his effort is reflected in the processes on which he worked during that year – put otherwise, how much his effort has resulted in the unjust enrichment of his partners and their investors.

68. The law of the State of New York permits a court to "otherwise in its judgment so adjust the equities between the parties that unjust enrichment is avoided." CPLR § 3004; *11 S. Laundry, Inc. v. MCD Assets, LLC*, 39 Misc. 3d 1218(A) (Sup. Ct. Westchester Cty. 2013). I conclude that it would be appropriate for the Court to enter such an award in this case to avoid any unjust enrichment to Secured Worldwide as a result of any use it may be making.

69. That said, I reject Kinney's assertion that he is entitled to somewhere between \$4 million and \$8 million, which is his estimate of what the value of his interest in Secured Worldwide would be today. (*See* Tr. at 661:22-24.) Because he elected rescission, Kinney is not entitled to what he is in essence seeking – the benefit of the bargain he rescinded, measured by what he believes is the current value of his interest in Secured Worldwide.

70. Even if Kinney were equitably entitled to an award measured by what the value of his interest in the company would have been, there is no basis on which the Court could enter such an award, because there is no competent evidence of what that number would be. Kinney did not have a valuation expert testify as to the current valuation of Secured Worldwide, and his resume does not suggest that he has the training or experience to offer such analysis. Kinney merely testified that the current value of the company was the value that was invested in the company (*see* Tr. at 439:15-440:19) and presented a term sheet (DX-43), which indicated that Secured Worldwide hoped to raise \$5 million on top of the “pre-financing” \$500,000 invested by Lipton, Lieberman, Plourde, Kinney, and an individual named Damon Davis. Kinney believes that his intellectual property is the reason that the company would have been able to raise such sums of money; indeed, he testified that, solely as a result of his contribution of his intellectual property to the venture, the “valuation” of the company jumped from \$500,000 to \$5 million to \$50 million. (*See* Tr. at 439:15-23, 469:9-470:1.) He offered no competent evidence to support that assertion.

71. In any event, there is no evidence in the record to show that Secured Worldwide actually raised this sum, or anything like it. The only evidence that any additional amount was invested beyond that disclosed in Schedule I to PX-5 (the Amended and Restated LLC Agreement signed in or about July 2014) is Lipton’s testimony that he put an additional sum of \$1.2 million into the company. (Tr. at 53:10-13.) That sum is well under the \$5 million that the company hoped to raise per the term sheet. Lipton also testified that Secured Worldwide had “two [undisclosed] investors in 2015” (Tr. at 542:20), but neither party elicited the amount that these investors put into the company.

72. Furthermore, investment by outsiders – even outsiders who were given Class B rather than Class A stock (as SDC Designs, LLC was) – would inevitably dilute the interest of the original investors in Secured Worldwide. But there is no evidence in the record that demonstrates how much dilution was caused by outside investment, and Kinney’s testimony does not take dilution into account.

73. Finally, the company is now a going concern that is selling product (which was not the case when Kinney left). So the notion that its “valuation” would be equal to the amount invested is no longer accurate, if it ever was. There is no hard evidence of Secured Worldwide’s worth today; Lipton estimated Secured Worldwide’s going-concern valuation at “[s]omewhere between one and three times revenues,” amounting to “[s]omewhere between” \$3 million and \$10 million. (Tr. at 543:9-19.) If the total valuation of the company is \$3 million (which is more or less equivalent to the amount that the Court knows to have been invested in the venture in total), then Kinney is seeking more than the total valuation for himself. There is nothing equitable about that.

74. Kinney himself has taken the position that the contribution of his intellectual property to Secured Worldwide was supposed to satisfy his obligation to contribute capital to the LLC. While Schedule I of the LLC Agreement, which sets out the capital contributions to be

made by the original investors, does not support his position concerning “in kind” capital contributions, Kinney’s testimony suggests that, at the time the contracts were signed, he personally valued his intellectual property at what it would have taken to obtain a 12.25% interest in Secured Worldwide – which is to say, \$61,250. (*See* Tr. at 423:18-20.) In view of the fact that his intellectual property had to be reworked by others in order to make it functional, that number seems to the Court to be an equitable estimate of the amount by which Secured Worldwide was enriched by virtue of the contribution of Kinney’s intellectual property. Of course, Kinney continued to work on developing the intellectual property that he brought into the company after he joined Secured Worldwide, but he did so at the company’s expense (*see* Tr. at 75:17-76:8, 82:9-15, 381:3-384:23, 432:19-24, 444:1-9; PX-3), and ultimately pursuant to an employment contract (*see infra* ¶ 77) – both of which militate against a finding that the company was “unjustly enriched” by using anything Kinney developed during his formal association with Secured Worldwide. I therefore award Kinney \$61,250, to prevent unjust enrichment to Secured Worldwide for whatever use it may have made or be making of the intellectual property that he brought to the company.

75. As will be seen below, Kinney agreed to accept \$75,000 in back pay for the work he performed during his first 11-12 months at Secured Worldwide. I will, therefore, not grant Kinney any award in equity to compensate him for that work. I will instead enforce what I find to be his contract.

Claim for Breach of Employment Contract (Kinney)

76. Kinney did not have an employment contract with Secured Worldwide prior to November 2014. There is no credible evidence that there was any meeting of the minds between Kinney and Lipton concerning all the material terms of his employment by Secured Worldwide. The credible evidence is that, until November 2014, Kinney repeatedly proposed employment terms that were either rejected or ignored by Lipton.

77. The terms of Kinney’s employment contract with Secured Worldwide as reached in early November 2014 were as follows: effective November 1, 2014, he was employed at a salary of \$200,000 per annum, payable every two weeks, and he was entitled to back pay of \$75,000 to compensate him for services rendered prior to November 1, 2014. (*See* DX-96.)

78. Kinney received only \$25,000 of the \$75,000 that Lipton promised to pay him for services rendered prior to November 1, 2014.

79. Kinney was paid beginning with the pay period that started November 22, 2014, which means he was not paid for one and one-half pay periods earlier in November.

80. Kinney was paid for all the time that he worked between November 22, 2014 and March 5, 2015, which is when he left Secured Worldwide and abandoned his employment of his own free will. (*See* Tr. at 345:12-346:19, 346:20-347:3.)

81. Secured Worldwide has breached Kinney's contract of employment.

82. The amount owed for those three weeks is as follows: \$3,846.16 for the period November 1-7, 2014, together with prejudgment interest at the New York rate of 9%; and \$7,692.31 for the period November 8-21, 2014, together with prejudgment interest at the New York rate of 9%. The Court's award of damages for the breach is not net of taxes, but because it is in the nature of back pay, Kinney will ultimately owe taxes on it. *See Noel v. N.Y. State Office of Mental Health Cent. N.Y. Psychiatric Ctr.*, 697 F.3d 209, 213 (2d Cir. 2012); *Guzman v. Prodelca Corp.*, No. 16 Civ. 2637, 2016 WL 4371631, at *1 (S.D.N.Y. Aug. 16, 2016).

83. Kinney is also owed \$50,000, together with prejudgment interest at the New York rate of 9% from January 1, 2015, the date by which the Court finds the \$50,000 in additional back pay should have been paid to Kinney. Again, these are pre-tax numbers; Kinney should consult with a tax adviser about the tax implications of this damages award.

Trademark Claim (Secured Worldwide)

84. Secured Worldwide seeks a declaration that it is the owner of the trademark "Vult" and variations thereof.

85. Secured Worldwide has registered the trademark "Vult" and variations thereof with the U.S. Patent and Trademark Office, which has assigned them the number 4,956,745. (Tr. at 222:19-223:9, 349:24-350:3; PX-18.)

86. Secured Worldwide was the first to use the trademark Vult and variations thereof in commerce. (Tr. at 76:9-15.)

87. The credible evidence in this lawsuit indicates that Secured Worldwide hired an outside consulting/branding firm to help it coin its trademark. (Tr. at 75:17-76:8.)

88. The trademark was devised at a group meeting involving representatives of Secured Worldwide, including Lipton and Kinney, and representatives of the outside firm. (Tr. at 75:15-76:8, 76:12-13, 347:4-12, 347:19-348:7, 348:20-22, 349:8-12.)

89. Secured Worldwide, not Kinney, owns the trademark Vult and variations thereof.

90. There is no basis, either in law or in equity, to conclude that Kinney is or ought to be deemed to own the trademark Vult. "The common law and the Lanham Act require that trademark ownership be accorded to the first bona fide user." *Hydro-Dynamics, Inc. v. George Putnam & Co., Inc.*, 811 F.2d 1470, 1472 (Fed. Cir. 1987) (emphasis added). "A protectable trademark is established when the mark is adopted and used to identify a product." *C.L.A.S.S. Promotions, Inc. v. D.S. Magazines, Inc.*, 753 F.2d 14, 16 (2d Cir. 1985). "A certificate of registration with the PTO is prima facie evidence that the mark is registered and valid (*i.e.*,

protectable), that the registrant owns the mark, and that the registrant has the exclusive right to use the mark in commerce.” *Guthrie Healthcare Sys. v. ContextMedia, Inc.*, 826 F.3d 27, 37 (2d Cir. 2016).

91. Any contribution that Kinney made to the endeavor to find a trademark for the Secured Worldwide product should be attributed to Secured Worldwide. (See Tr. at 220:2-9, 348:10-350:11; DX-68.) “Mere invention, creation, or *discussion* of a trademark does not create priority rights.” *Hydro-Dynamics, Inc.*, 811 F.2d at 1473 (emphasis added). “The mere fact that a party conceived the idea of a trademark and discussed it with others does not establish priority as of the date of those events.” 2 J. Thomas McCarthy, *McCarthy on Trademarks and Unfair Competition* § 16:12 (4th ed. 1997); see also *Compton v. Fifth Ave. Ass’n, Inc.*, 7 F. Supp. 2d 1328, 1331 (M.D. Fla. 1998). “The user who first appropriates the mark obtains [an] enforceable right to exclude others from using it, as long as the initial appropriation and use are accompanied by an intention to continue exploiting the mark commercially.” *George Nelson Found. v. Modernica, Inc.*, 12 F. Supp. 3d 635, 645 (S.D.N.Y. 2014).

92. Kinney is hereby enjoined from making any use in commerce of Secured Worldwide’s registered trademark 4,956,745.

Copyright Claim (Secured Worldwide)

93. Secured Worldwide registered certain computer software entitled “Alkis Diamond-Model Utility” with the U.S. Register of Copyrights, TXu001928825. (PX-27; Tr. at 224:7-227:3, 352:7-9.) The software is used “in terms of a system whereby [Secured Worldwide] select[s] diamonds from the universe of diamonds to create the individual collections that are then enclosed in the individual products.” (Tr. at 81:16-82:17.)

94. The registration is presumptive proof of Secured Worldwide’s ownership of the copyright in the registered software. “A certificate of copyright registration constitute[s] prima facie evidence of the validity of the copyright and of the facts stated in the certificate, and, [o]rdinarily, a copyright registration is presumed valid.” *Palmer/Kane LLC v. Rosen Book Works LLC*, 15 Civ. 7406, 2016 WL 4534896, at *3 (S.D.N.Y. Aug. 30, 2016).

95. The registered software was created by a computer programmer named Alkis Vazacopoulos, who was associated with a company called Industrial Algorithms. (Tr. at 82:3-17, 437:12-20; PX-3.)

96. Secured Worldwide retained Industrial Algorithms to write software that would permit it to assemble equal “baskets” of diamonds to be included in its products at various price points. (Tr. at 82:8-15, 350:12-22; PX-3.)

97. Industrial Algorithms signed a contract with Secured Worldwide that required it to acknowledge that the “deliverables” were works for hire owned by Secured Worldwide. (Tr. at 83:8-15, 350:20-22; PX-3 at 4.)

98. The copyrighted software is the “deliverable” that was created by Industrial Algorithms.

99. The copyrighted software puts expression to an idea or ideas that were generated, in whole or in part, by Kinney. (Tr. at 437:14-439:14; DX-65.)

100. Kinney himself admitted during the trial that he required the services of a more expert programmer than himself to create workable software to use in connection with the assembly of Secured Worldwide’s Vult products. (See Tr. at 415:14-25, 439:8-14.)

101. Copyright does not protect ideas. Rather, it protects expressions of ideas that are fixed in a tangible medium. *Mattel, Inc. v. Goldberger Doll Mfg. Co.*, 365 F.3d 133, 135 (2d Cir. 2004); *McDonald v. West*, 138 F. Supp. 3d 448, 455 (S.D.N.Y. 2015).

102. The expression of ideas fixed in a tangible medium – which is to say, the property that was registered for federal copyright protection by Secured Worldwide – is the computer program that was created by Industrial Algorithms, not some outline of ideas created by Kinney. (PX-3; PX-27; Tr. at 224:20-225:19.)

103. Secured Worldwide, not Kinney, owns the copyrighted computer program software. (PX-3.)

104. Kinney is hereby enjoined from making any use of the copyrighted program.

105. To the extent that Kinney seeks copyright protection for the word “Vult” – because he allegedly uttered the word and wrote it down (*see supra* ¶ 49) – his claim fails, because the word “Vult” is not copyrightable. “It is axiomatic that copyright law denies protection to ‘fragmentary words and phrases’ and to ‘forms of expression dictated solely at functional considerations’ on the grounds that these materials do not exhibit the minimal level of creativity necessary to warrant copyright protection.” *CMM Cable Rep, Inc. v. Ocean Coast Props., Inc.*, 97 F.3d 1504, 1519 (1st Cir. 1996); *see also Arica Inst., Inc. v. Palmer*, 970 F.2d 1067, 1072 (2d Cir. 1992) (“[S]ingle words or short phrases . . . do not exhibit the minimal creativity required for copyright protection.”); *N.Y. Mercantile Exch., Inc. v. IntercontinentalExchange, Inc.*, 389 F. Supp. 2d 527, 544 (S.D.N.Y. 2005). “The Copyright Office’s own interpretive regulations explicitly embrace this rule of non-copyrightability.” *CMM Cable*, 97 F.3d at 1520; *see also* 37 C.F.R. § 202.1(a) (1994) (excluding from copyright protection “[w]ords and short phrases such as names, titles, and slogans” and “familiar symbols and designs”).

Web Site Claim (Secured Worldwide)

106. Secured Worldwide maintained and maintains a web site and ownership of several domain names relating to its trademarked Vult product: www.vult.com, www.securedworldwide.com, and www.vult.net. (Tr. at 93:10-24.)

107. During his tenure with Secured Worldwide, Kinney was in charge of the web site as its webmaster; he helped develop it and he was the only person at Secured Worldwide who was able to fully access it. He also caused the domain names to be registered with GoDaddy, a well-known domain registrar. (Tr. at 93:14-24, 178:7-23, 319:21-320:16, 320:25-321:4.)

108. Kinney's control over the Secured Worldwide web site and his registration of the domain names was done on behalf of and as an agent for Secured Worldwide, not for himself individually.

109. In early March 2015, while engaged in a dispute with Lipton and Secured Worldwide, Kinney effectively locked Secured Worldwide out of its own web site. (Tr. at 93:9-94:2.)

110. On April 1, 2015, this Court issued a preliminary injunction directing Kinney to give control over the web site to Secured Worldwide. (Dkt. #35.)

111. Although Secured Worldwide has regained day-to-day control of the web site since this Court enjoined Kinney from interfering with that control, the domain registrar GoDaddy, from whom the domain names were purchased, will not delete Kinney as an owner of the web site absent a court order settling the ownership of the domain names and the web site. (Tr. at 94:12-20.)

112. Secured Worldwide is the sole owner of the three domain names listed above and is the only proper controller of the web site. The fact that Kinney was the agent of Secured Worldwide who created the web site and registered the domain names does not make him the owner of the web site or the domain names as against Secured Worldwide.

113. Kinney is hereby enjoined from asserting that he owns any of the above-listed domain names or from asserting ownership or control over any web site using those domain names, whether previously or hereinafter created and regardless of his role in creating them.

Patent Claim (Secured Worldwide)

114. Secured Worldwide has filed a provisional and a final application with the U.S. Patent and Trademark Office for the issuance of a patent for "SECURE DIAMOND SMART CARDS AND EXCHANGE SYSTEMS THEREFOR." (DX-108; PX-13; PX-14; PX-15; PX-16; Tr. at 201:13-210:15.)

115. Listed as inventors on the application are Kinney, Lipton, and Plourde. (DX-108; PX-13; PX-16; Tr. at 199:4-14, 200:13-201:11.)

116. No patent has as yet issued. (Tr. at 81:9-10.)

117. Kinney was the principal contributor of technology to the invention; Lipton had the idea for the invention; Plourde created an “ecosystem” for the product’s aftermarket and drew some of the concepts pertaining to the diagrams in the patent. (Tr. at 378:11-18, 378:19-25, 379:1-23.)

118. Moskowitz, an experienced patent lawyer, determined, after listening to presentations from the principals of Secured Worldwide, who should be listed as inventors on the patent. Secured Worldwide followed Moskowitz’s advice in this regard. (Tr. at 200:13-201:11.)

119. All three inventors signed patent assignments assigning their interests in the invention and any patent that might issue thereon to Secured Worldwide. (PX-15; PX-16; Tr. at 210:16-216:11.)

120. 35 U.S.C. § 262 sets forth the rights of joint owners of a patent: “In the absence of any agreement to the contrary, each of the joint owners of a patent may make, use, offer to sell, or sell the patented invention within the United States, or import the patented invention into the United States, without the consent of and without accounting to the other owners.” *See also Advanced Video Techs., LLC v. HTC Corp.*, 103 F. Supp. 3d 409, 417 (S.D.N.Y. 2015). “[I]n the context of joint inventorship, each co-inventor presumptively owns a pro rata undivided interest in the entire patent, no matter what their respective contributions.” *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1465 (Fed. Cir. 1998). “Each co-owner of a United States patent is ordinarily free to make, use, offer to sell, and sell the patented invention without regard to the wishes of any other co-owner. Each co-owner’s ownership rights carry with them the right to license others, a right that also does not require the consent of any other co-owner. . . . [T]he co-owner may not be prohibited from exploiting its rights in the patent, including the right to grant licenses to third parties on whatever conditions the co-owner chooses.” *Schering Corp. v. Roussel-UCLAF SA*, 104 F.3d 341, 344 (Fed. Cir. 1997) (internal citations omitted); *see also Canon Inc. v. Tesseron Ltd.*, 146 F. Supp. 3d 568, 575 (S.D.N.Y. 2015).

121. Because Kinney’s assignment has been rescinded, he and Secured Worldwide (by assignment from Lipton and Plourde) are co-owners of the invention described in the patent application “US 2015/0223580 A1,” and each of Kinney and Secured Worldwide has all of the rights set forth in 35 U.S.C. § 262. (*See* DX-108.)

Trade Secrets Claim (Secured Worldwide)

122. Secured Worldwide is not entitled to a permanent injunction barring Kinney from using the trade secrets he was developing to make the company’s invention commercially viable,

because it has not demonstrated that Kinney has access to any trade secrets of Secured Worldwide.

123. From the testimony at the trial, it does not appear that Secured Worldwide is presently using any trade secrets that Kinney worked on during his time with Secured Worldwide. It appears from the evidence that there were two such “trade secrets” in addition to the copyrighted computer program discussed above: the resin that Kinney was developing, at Secured Worldwide’s expense, to create the “puck” in which the diamond baskets would be encased; and some unspecified aspects of the technology that was to be used to make the cell phone “authentication” feature work. However, the credible evidence establishes that the resin ultimately proved unsatisfactory, and the authentication feature as developed by Kinney did not work. The company had to hire and pay others to re-work these technologies in order to make the claimed invention commercially viable after Kinney left the company, and had to substantially delay the launch of the product in order to develop these new processes. (*See Tr. at 72:18-75:13, 381:21-384:1.*)

124. There is no evidence that Kinney has any access to the new processes that were developed by Secured Worldwide after he left. Therefore, there is no basis for the Court to conclude that Kinney would be in a position to use these “trade secrets.” There is also no evidence in the record that Kinney has access to any other sort of trade secret, such as Secured Worldwide’s current customer lists. “Forward-looking injunctive relief of this sort is not available absent plausible allegations that a plaintiff faces ‘a likelihood of substantial and immediate irreparable injury’ because of a real or immediate threat the plaintiff will suffer an injury again. While evidence of past injury may bear on the likelihood of future injury, it does not establish it on its own.” *See Silberstein v. Aetna, Inc.*, No. 13 Civ. 8759, 2015 WL 1424058, at *16 (S.D.N.Y. Mar. 26, 2015) (internal citations omitted).

125. The preliminary injunction barring Kinney from using Secured Worldwide’s trade secrets is hereby dissolved, subject, however, to the limited permanent injunction that the Court is entering in Plaintiff’s favor.

Non-Competition Agreement (Secured Worldwide)

126. Secured Worldwide is not entitled to a permanent injunction enforcing the non-competition agreement in the LLC Agreement, because the LLC Agreement has been rescinded.

127. The preliminary injunction barring Kinney from entering into any business that competes with Secured Worldwide’s business is hereby dissolved, subject, however, to the limited permanent injunction that the Court is awarding in Plaintiff’s favor.

WHEREFORE, the parties shall have judgment as follows:

1. Plaintiff Secured Worldwide shall have judgment against Defendant Kinney as follows:
 - (i) Declaring that Plaintiff is entitled to the rights in the registered trademark Vult® and its variations, and enjoining Defendant from using the registered trademark Vult®, its variations, and/or any mark that is confusingly similar to the registered trademark Vult®;
 - (ii) Declaring that Plaintiff is entitled to the rights in the software reflected in Plaintiff's copyright registration and enjoining Defendant from infringing on Plaintiff's copyright, TXu001928825;
 - (iii) Declaring that Plaintiff is the sole owner of and entitled to the domain names www.vult.com, www.securedworldwide.com, www.vult.net, and their variations, which remain registered to Cormac Kinney on the records of GoDaddy, the domain name registrar; and
 - (iv) Enjoining Defendant from interfering with the use, dominion and control over Plaintiff's web site(s) and domain name(s), or from interfering with the transfer of ownership of domain names to Secured Worldwide by GoDaddy.
2. Defendant-Counterclaim Plaintiff Kinney shall have judgment against Plaintiff-Counterclaim Defendant Secured Worldwide as follows:
 - (i) In the amount of \$3,846.16, with interest at the rate of 9% from November 2, 2014 until the date of entry of this judgment; and
 - (ii) In the amount of \$7,692.31, with interest at the rate of 9% from November 9, 2014 until the date of entry of this judgment; and
 - (iii) In the amount of \$50,000, with interest at the rate of 9% from January 1, 2015 until the date of entry of this judgment; and
 - (iv) In the amount of \$61,250, which shall be an award in equity to prevent unjust enrichment to Plaintiff upon rescission of the contracts in suit.

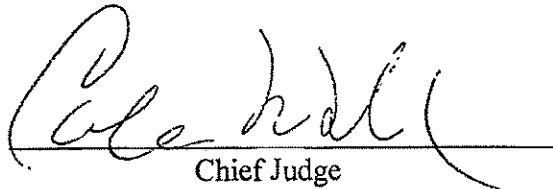
The total award of damages and equitable monetary relief shall bear interest at the Fed Funds Rate from the date of entry of the judgment until the date the judgment is satisfied.

3. Third-Party Defendant A. Joseph Lipton shall have judgment dismissing all claims as against him personally.

4. All other claims and counterclaims/third party claims asserted by any party against any other party are hereby DISMISSED WITH PREJUDICE.

The Clerk of the Court shall enter judgment accordingly, and close the file.

Dated: December 15, 2016



Chief Judge

BY ECF TO COUNSEL FOR SECURED WORLDWIDE/LIPTON
BY FIRST CLASS MAIL TO MR. KINNEY

EXHIBIT 2



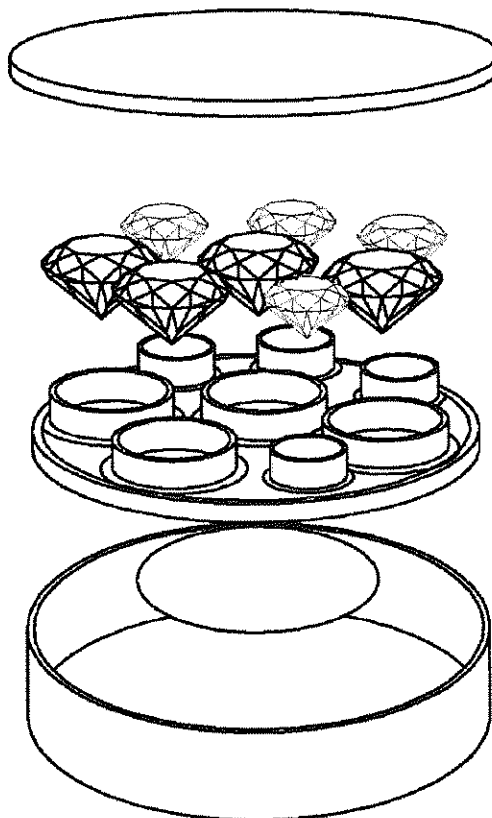
US 20150223580A1

(19) **United States**(12) **Patent Application Publication**
Kinney et al.(10) **Pub. No.: US 2015/0223580 A1**(43) **Pub. Date: Aug. 13, 2015**(54) **SECURE DIAMOND SMART CARDS AND
EXCHANGE SYSTEMS THEREFOR***G06Q 30/00* (2006.01)*B65D 25/20* (2006.01)(71) Applicant: **Secured Worldwide, LLC**, New York,
NY (US)(52) **U.S. Cl.**CPC *A45C 11/16* (2013.01); *G06Q 30/0185*
(2013.01); *B65D 25/205* (2013.01); *B65D*
77/02 (2013.01); *B65B 61/26* (2013.01)(72) Inventors: **Cormac L. Kinney**, New York, NY
(US); **A. Joseph Lipton**, Weston, CT
(US); **Jay C. Plourde**, New York, NY
(US)

(57)

ABSTRACT

A tamperproof diamond package comprises a package body; at least one chip embedded in the package body and at least one antenna configured to enable communication with the chip; anti-counterfeiting visual impressions on the package body; a diamond pouch formed at a predetermined section within the package body; and one or more diamonds located inside the diamond pouch and an outer covering encasing the package body and configured to reveal any tampering with the one or more diamonds located in the diamond pouch. The diamond package can be credit card shaped and also contains serial number and web-site information and be provided in nominal dollar values. An associated diamond exchange system utilizes the diamond packages and provides a registration server which stores unique identifying information that enable interrogating the individual diamond packages and checking their authenticity with the registration server.

(21) Appl. No.: **14/619,633**(22) Filed: **Feb. 11, 2015****Related U.S. Application Data**(60) Provisional application No. 61/938,923, filed on Feb.
12, 2014.**Publication Classification**(51) **Int. Cl.***A45C 11/16* (2006.01)*B65B 61/26* (2006.01)*B65D 77/02* (2006.01)

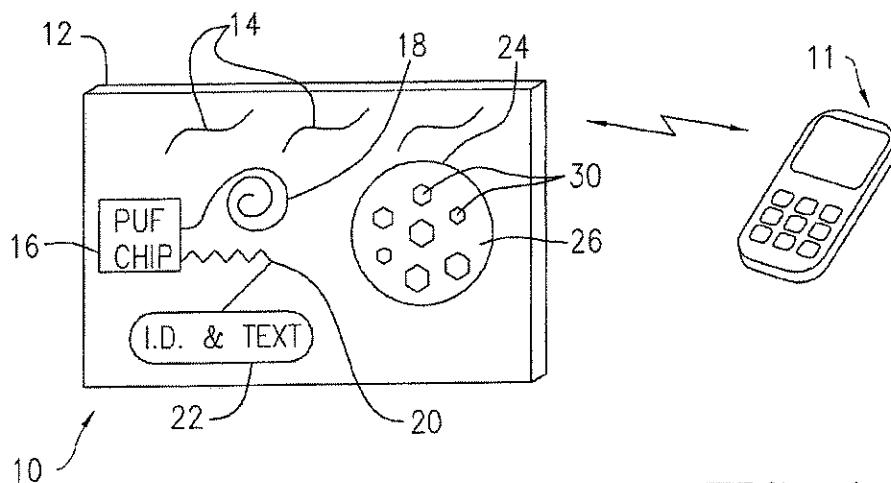


FIG. 1

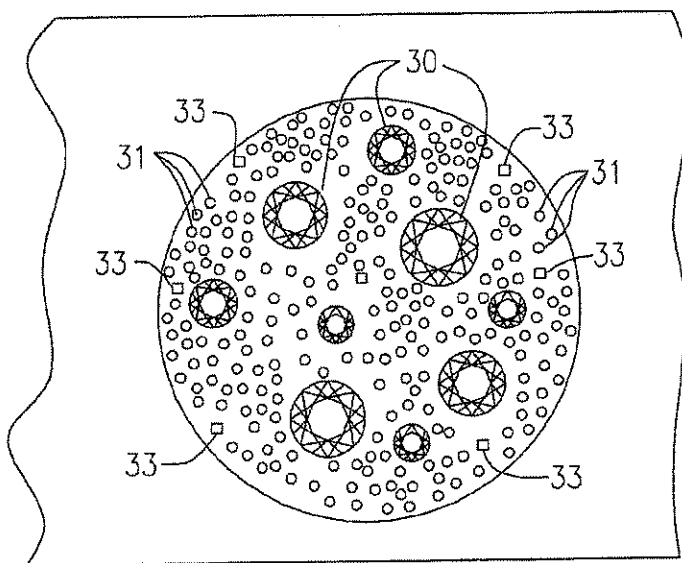


FIG. 3

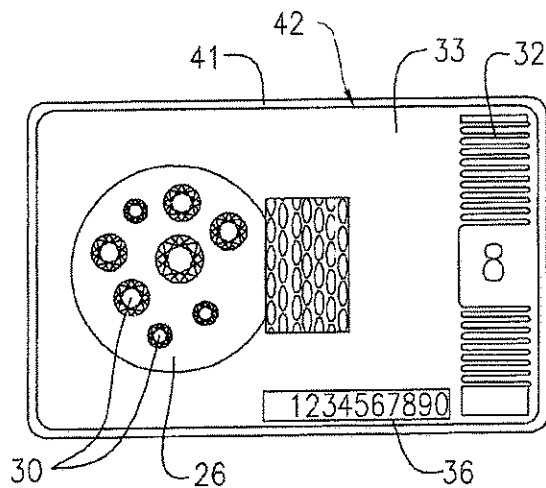


FIG. 2a

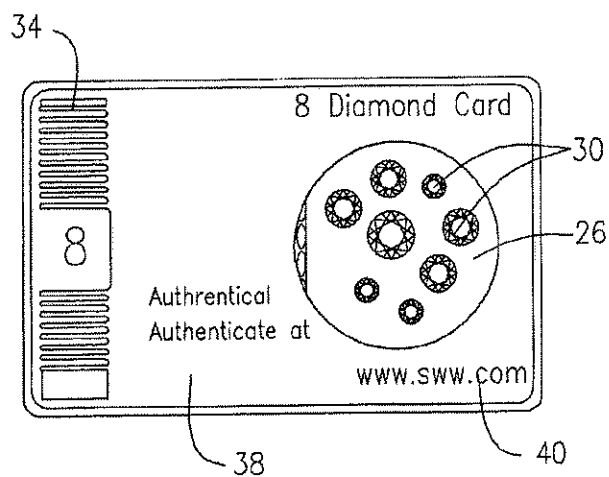


FIG. 2b

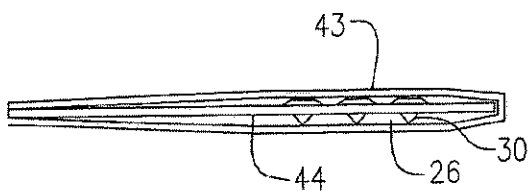
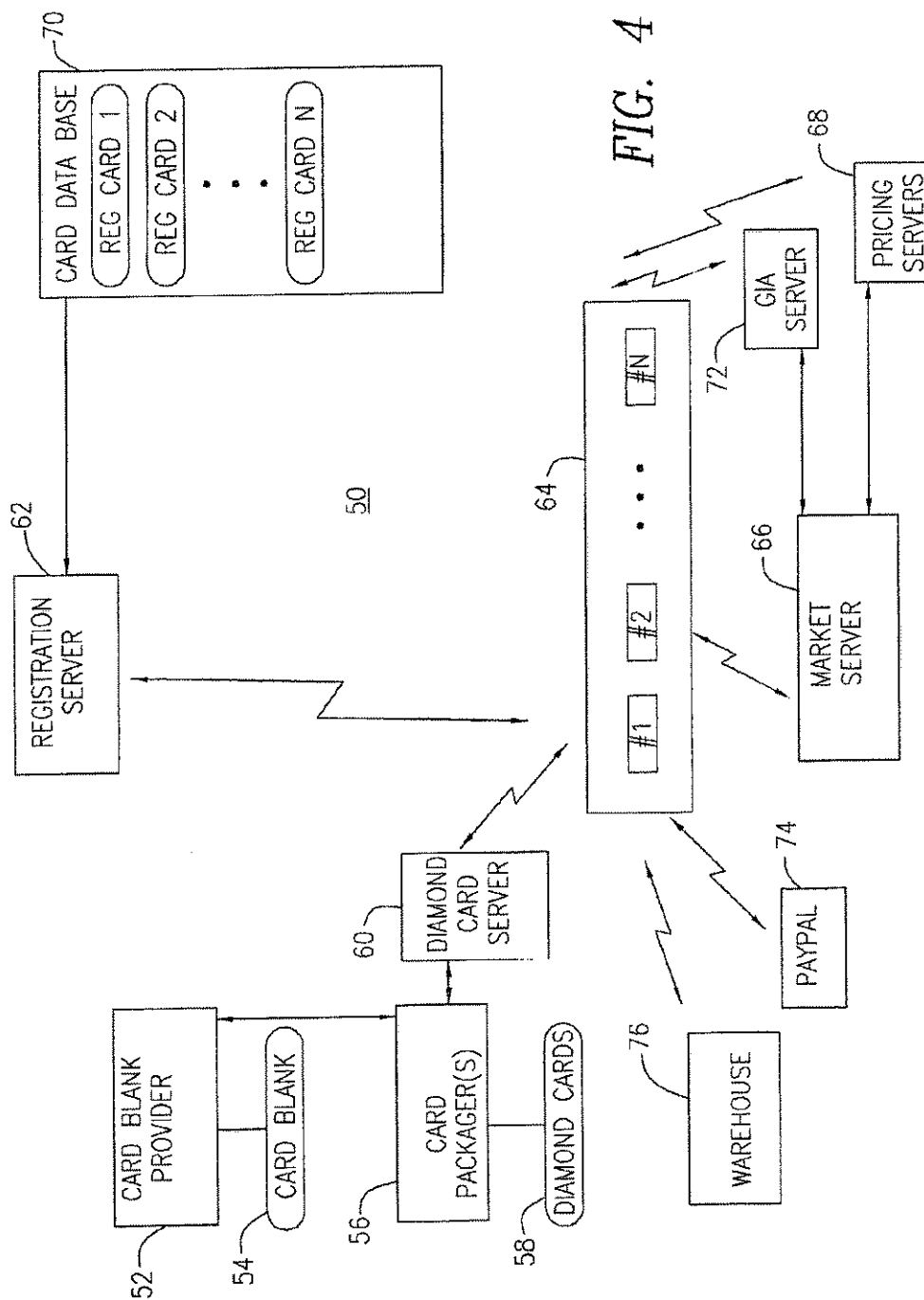


FIG. 2c



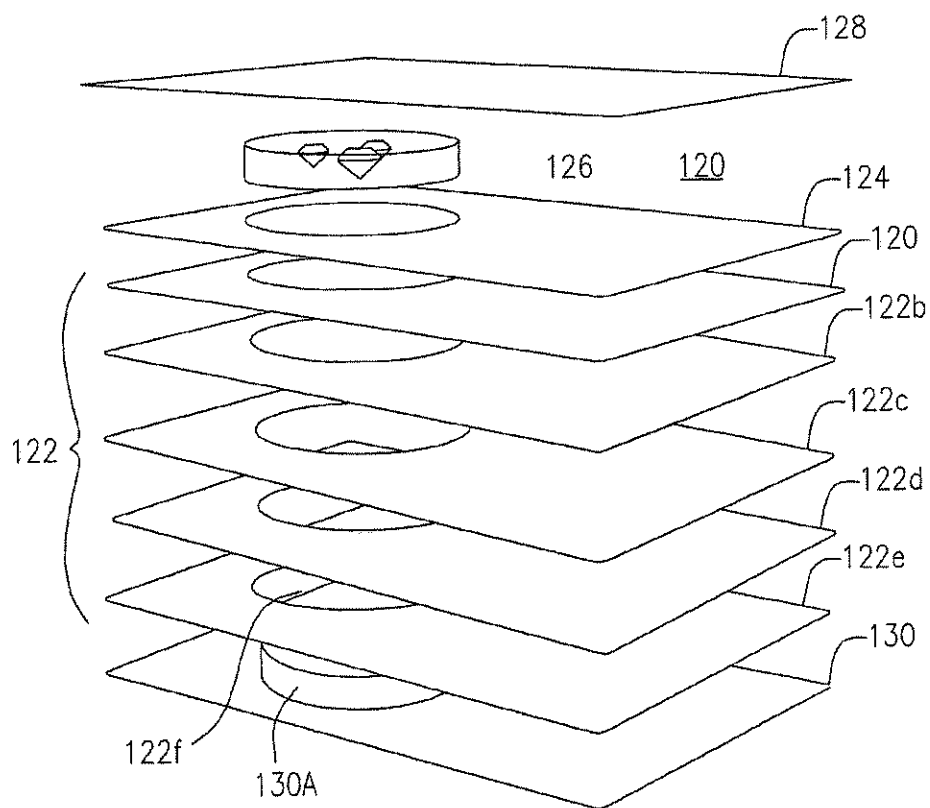


FIG. 5

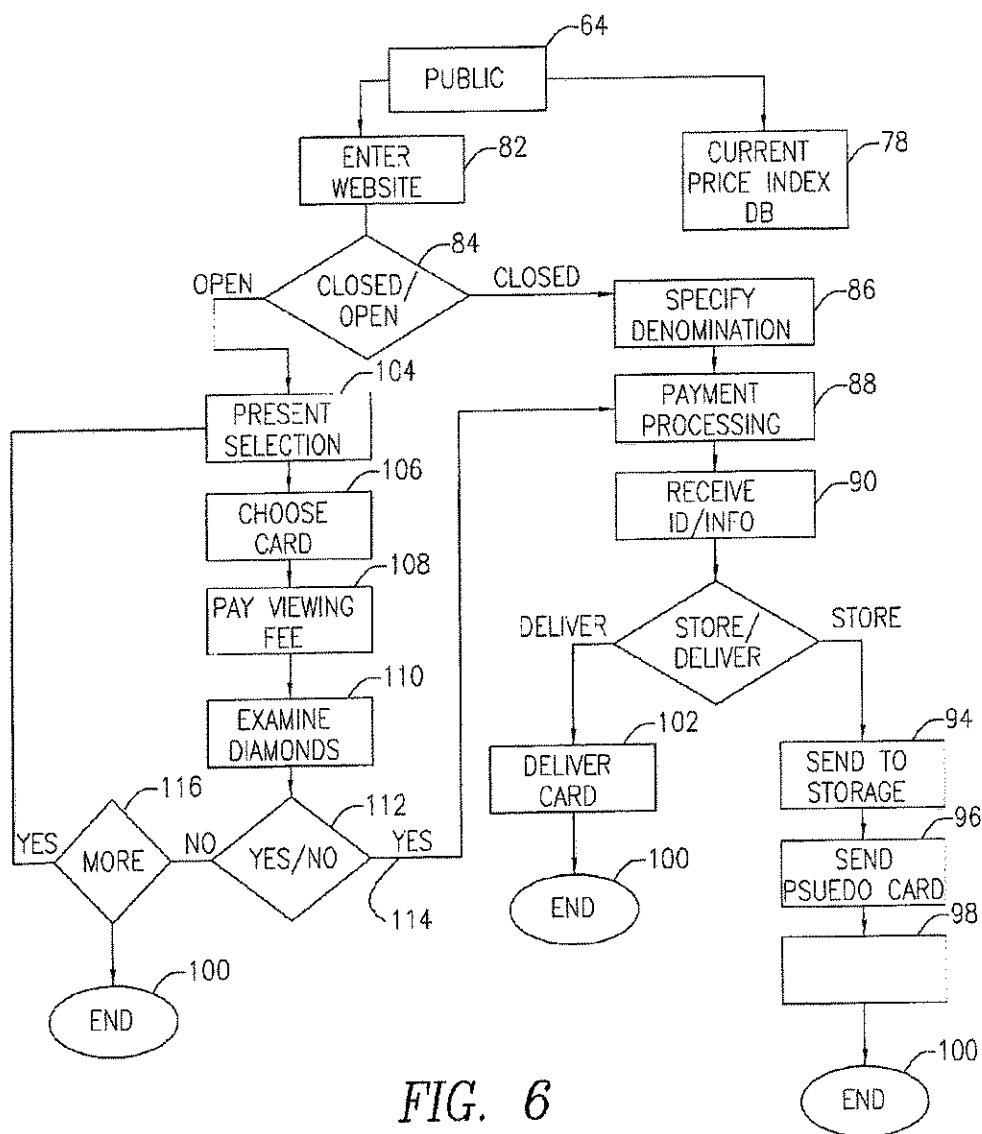
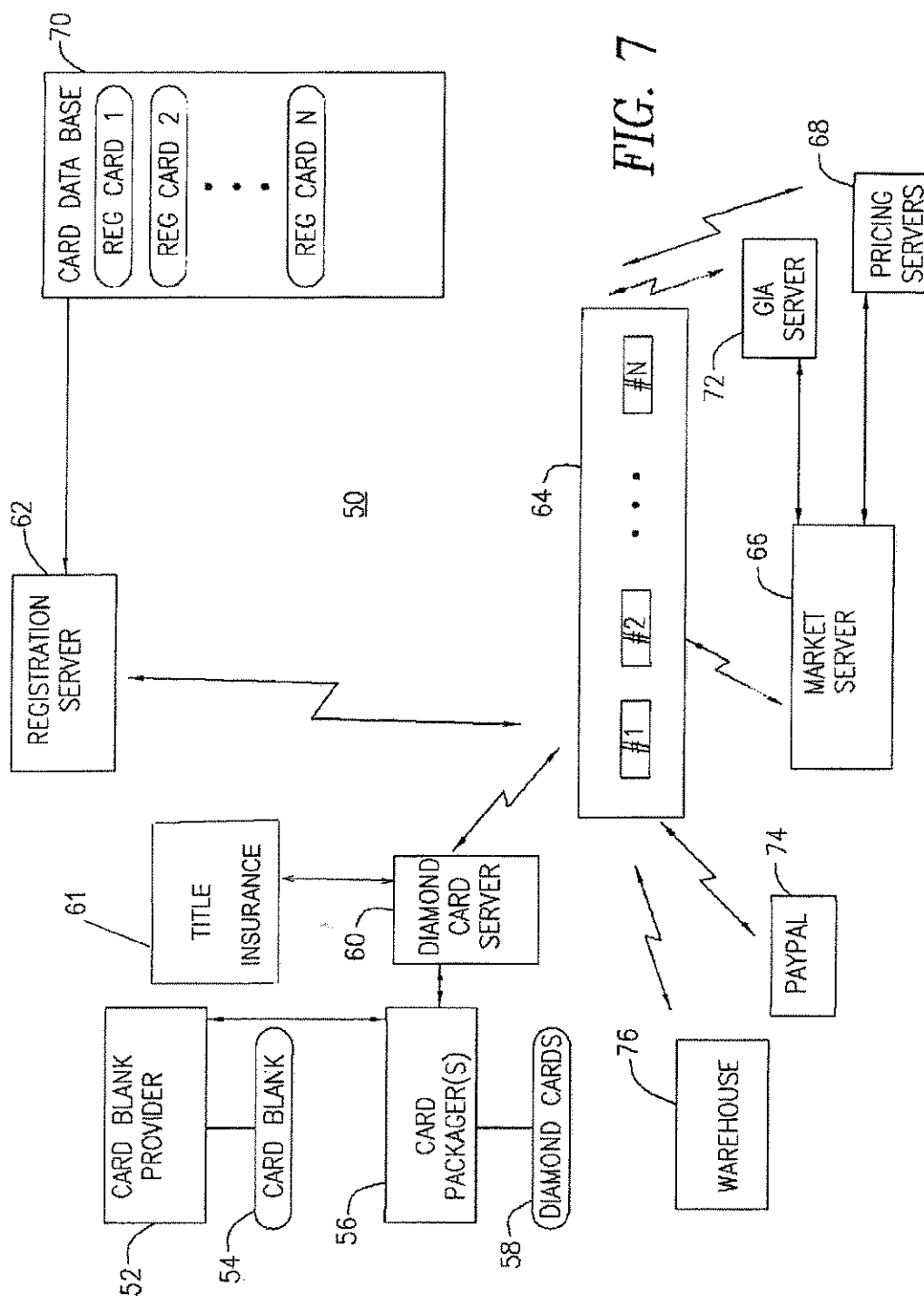


FIG. 6



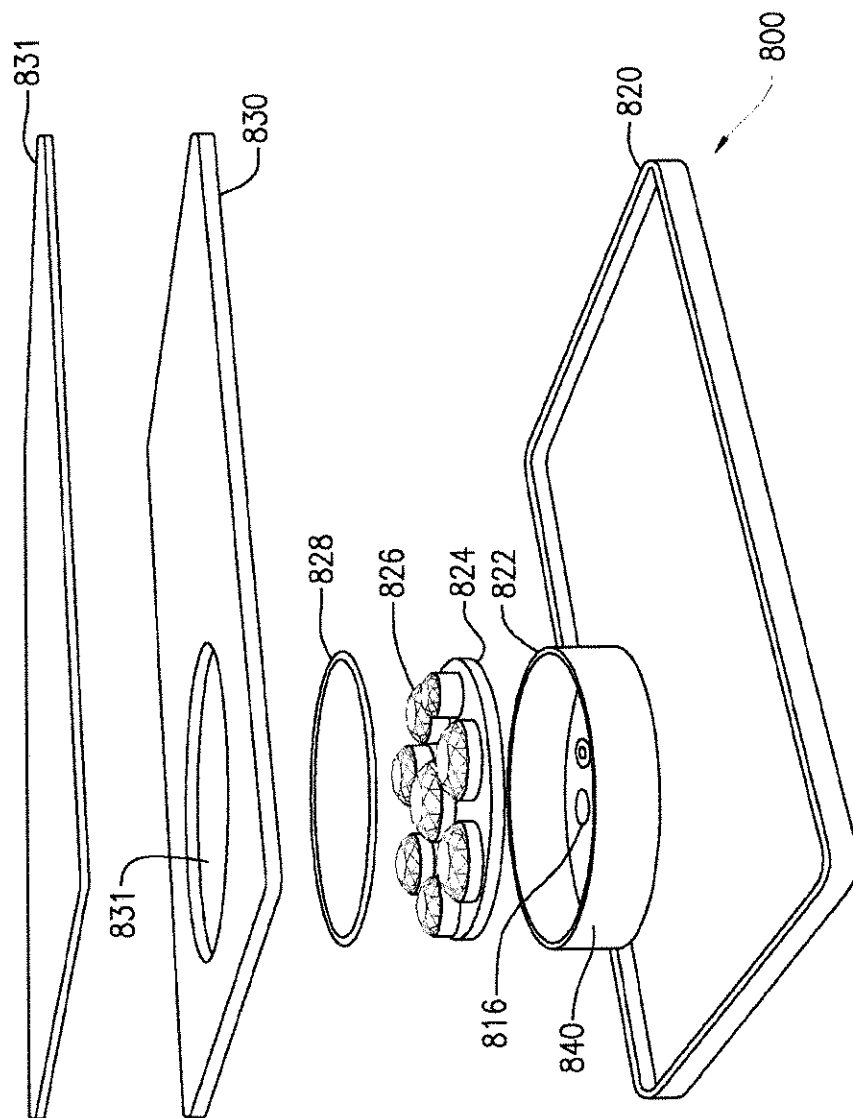


FIG. 8

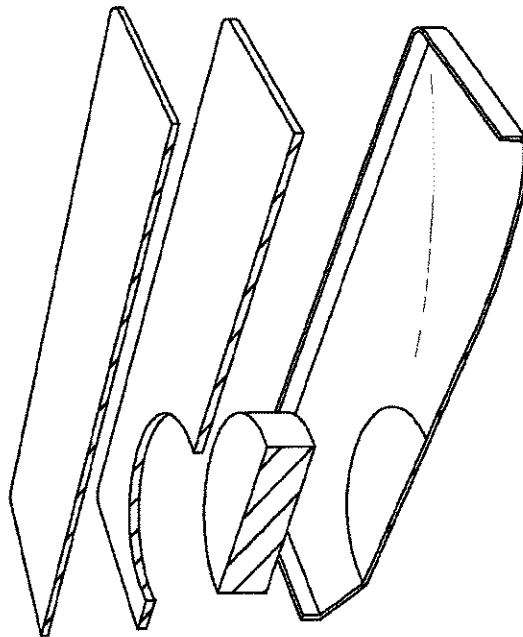


FIG. 8b

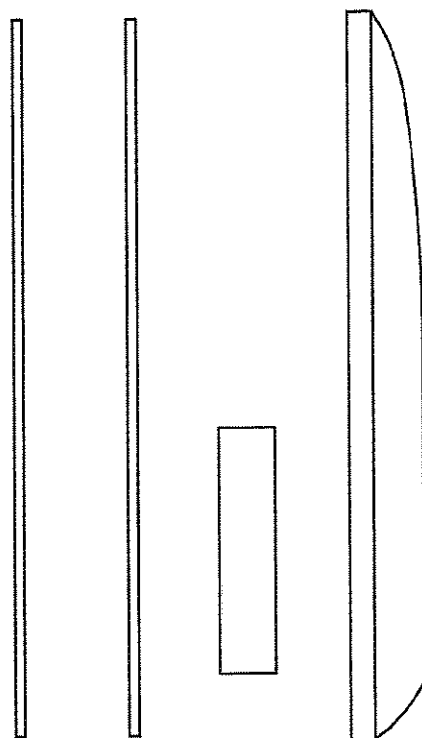


FIG. 8a

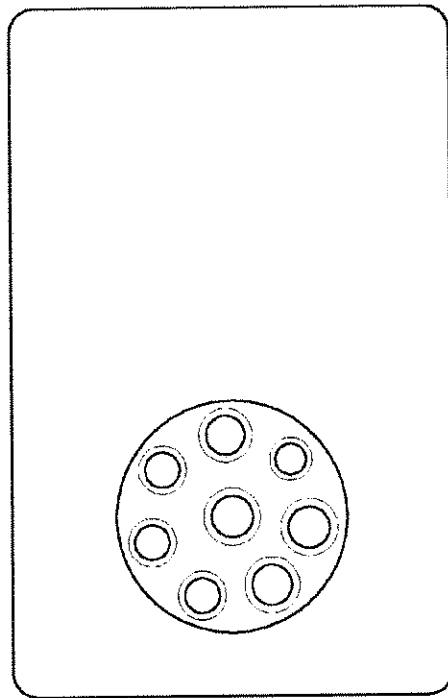


FIG. 8d

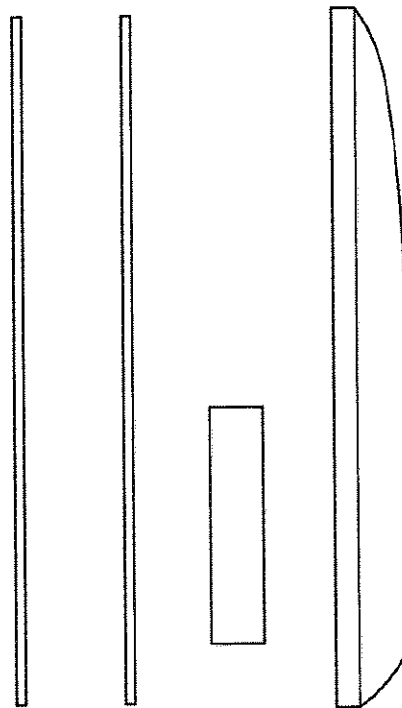


FIG. 8c

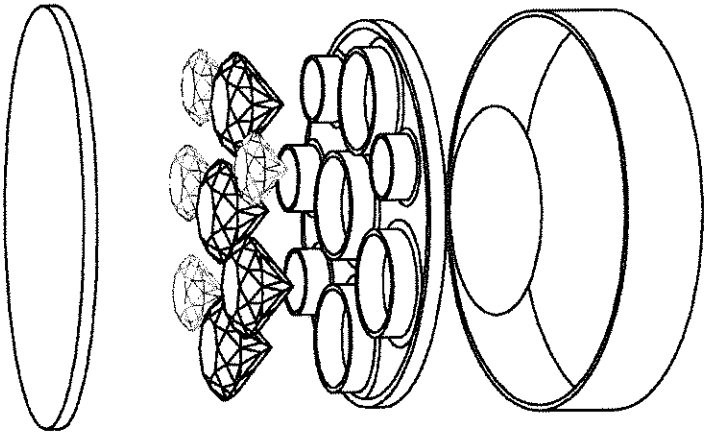


FIG. 9a

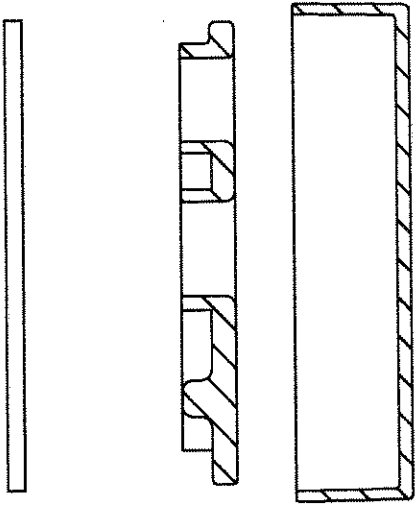


FIG. 9b

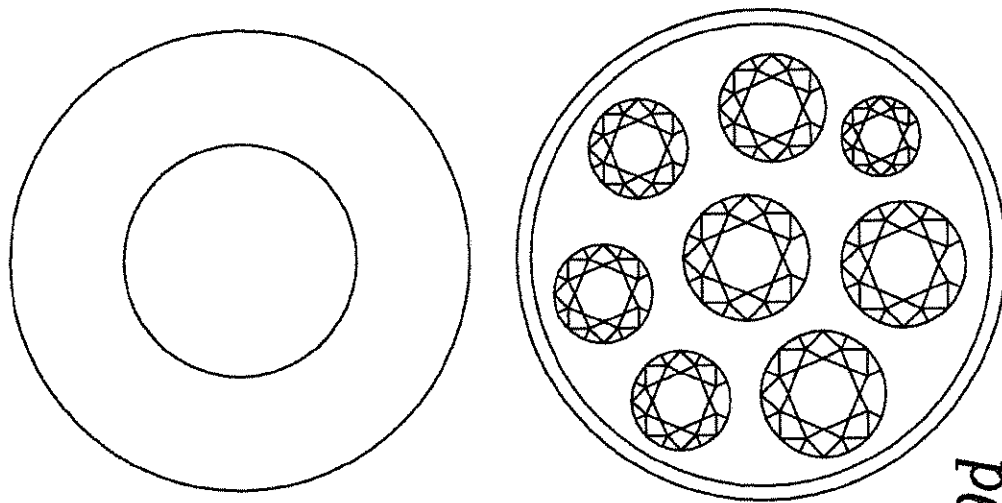


FIG. 9d

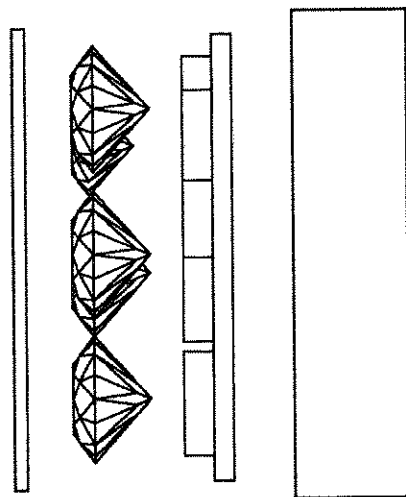


FIG. 9c

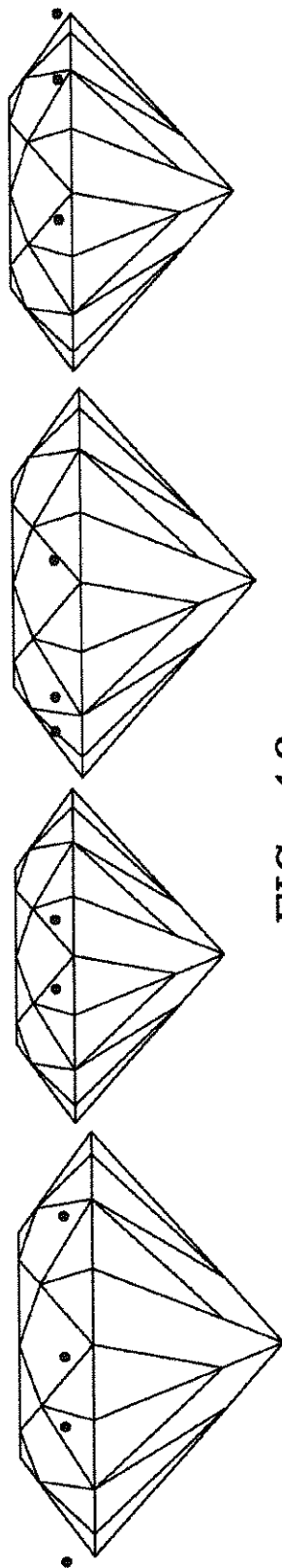


FIG. 10a

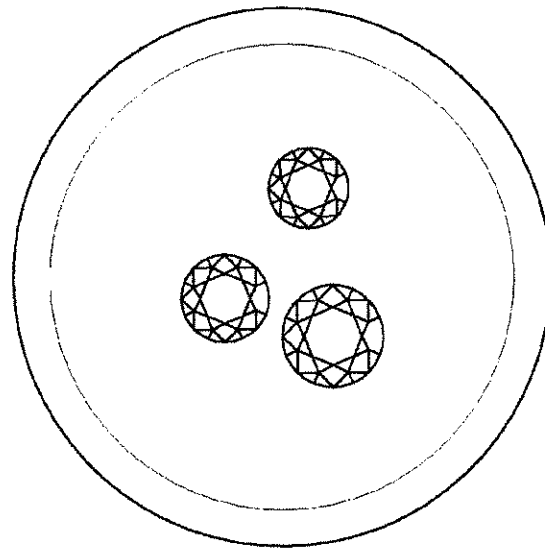


FIG. 10b

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SECURE DIAMOND SMART CARDS AND EXCHANGE SYSTEMS THEREFOR

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit of and priority to Provisional Patent Ser. No. 61/938,923 filed Feb. 12, 2014 and Provisional Patent Ser. No. 62/022,365 filed on May 23, 2014, the contents of both of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] The present invention is directed to a system and method for authenticating and tracking expensive objects and, more particularly, to a system and method of packaging, trading, and creating a marketplace for standardized value, precious stone packages and to various security authentication features and elements related thereto.

[0003] The world stock trading exchanges provide a very easy and convenient medium for issuing and trading in company shares. It is also easy to trade in certain well-known coins or in standardized bars of gold and the like. Their value can be easily traded and no specific or particularly difficult authentication processes of the merchandise is necessary.

[0004] This is not so at all with respect to precious stones, particularly diamonds. The prices of seemingly identical diamonds can vary in price considerably. Valuation of diamonds cannot be done on the spot. Authentication of diamonds that are actively traded poses an especially serious problem of authentication, including the substitution of fake or non-genuine diamonds for real diamonds, given the thousands of dollars price tag of individual diamonds. There is a need and desire in the marketplace for technology and a system that enable rapid, secure and impersonal exchanges that permit the purchase of diamonds in a very reliable and secure manner.

[0005] Presently, creating a marketplace in diamonds is compromised by counterfeit items in the supply chain or channels. The possibility of counterfeits creates the potential for unacceptable losses to purchasers, causing friction in trade and limiting the market to few sophisticated participants. What is needed is a way for customers to reliably authenticate the item, i.e., a standardized package of diamonds, before purchase, using technology widely in use by consumers worldwide, namely through the use of an Internet-ready cell phone. A second difficulty with creating a marketplace for diamonds is that owners may typically want to store their diamond merchandise with a third party, for example, a diamond warehouse, but require an authentic, convenient and highly reliable system for ascertaining that the specific goods are being held as agreed, without relying on the naked assurance of a third party alone. The creation and wide acceptance of such diamond exchanges and markets would further benefit from introducing standardized diamond packs of known or nominal monetary values that could be purchased and/or exchanged in unitary quantities without much regard to the parameters of the individual diamonds in each pack. Such a standardized marketplace product(s) would enable people to invest their assets in standardized diamond packets knowing that these assets are highly liquid and easily sold, traded, and/or converted to other asset categories.

SUMMARY OF THE INVENTION

[0006] Accordingly, it is an object of the present invention to provide a marketplace for diamonds that is highly secure and reliable.

[0007] It is another object of the invention to provide a diamond packaging format that is extremely secure and totally invulnerable to tampering with the diamond merchandise stored therein.

[0008] It is yet another object of the invention to provide a worldwide, Internet accessible system and marketplace for exchanging diamonds based on standardized values of diamond packets.

[0009] The foregoing and other objects of the invention are realized with a system and method that processes and handles tamperproof diamond packages wherein each diamond package includes: a package body; at least one PUF chip embedded in the package body and at least one antenna configured to enable communication with the PUF chip; anti-counterfeiting visual impressions on the package body; a diamond pouch formed at a predetermined section within the package body; and one or more diamonds located inside the diamond pouch and an outer covering encasing the package body and configured to reveal any tampering with the one or more diamonds located in the diamond pouch.

[0010] In preferred embodiments, the package body comprises a thin, credit card shaped body with a thickness that is not greater than 0.25 other dimensions associated with the package body. Further, the body shape is rectangular and includes at least a serial number and website information that directs a user to a website that is configured to enable checking the authenticity of the diamond packages. Preferably, the diamond packages have a nominal dollar value that can be \$10,000.00, \$40,000.00, and/or \$100,000.00. Other nominal values are, of course, possible.

[0011] To further prevent tampering or counterfeiting of the diamond packages, the body can include a distribution of microspheres that create a unique visual image in each package that is different from any other image on any other diamond package. The microspheres can be produced from natural or synthetic materials and can be made of glass, a polymer or ceramic material.

[0012] A diamond exchange system according to the invention operates in combination with the diamond packages and includes one or more entities that package and make available the diamond packages and a registration server that stores unique identification information for each of the diamond packages and provides an interface to members of the public that enable providing to the registration server responses to interrogation signals submitted to any given diamond package. The registration server is also enabled to carry out an authentication process that verifies the authenticity of the given diamond package. The system may also include an auxiliary verification server that is configured to enable accessing diamond authenticity certificates that identify the features of the diamonds in the given diamond package. The system may also include an inventory warehouse, an associated server, as well as a further server that provides current pricing information.

[0013] Other features and advantages of the present invention will become apparent from the following description of the invention that refers to the accompanying drawings.

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BRIEF DESCRIPTION OF THE DRAWINGS

- [0014] FIG. 1 is a schematic of a smart card style diamond package.
- [0015] FIG. 2a shows a pictorial rendition of a diamond smart card package from the front view thereof.
- [0016] FIG. 2b shows the rear view of the smart card diamond package of FIG. 2(a).
- [0017] FIG. 2c shows a thickness cross-section of the diamond smart card package.
- [0018] FIG. 3 shows a security measure for the diamond pouch on the smart card.
- [0019] FIG. 4 is a system block diagram of the present invention.
- [0020] FIG. 5 is an exploded view of a smart card diamond package in accordance with a further embodiment of the invention.
- [0021] FIG. 6 is a flowchart of an algorithm in accordance with the present invention.
- [0022] FIG. 7 is a further system block diagram of the present invention.
- [0023] FIG. 8 is an exploded view of a further embodiment of the invention.
- [0024] FIGS. 8a, 8b, 8c and 8d show detail of the embodiment of FIG. 8.
- [0025] FIGS. 9a, 9b, 9c and 9d show still further details of the embodiment of FIG. 8.
- [0026] FIG. 10a is a diagrammatical side view showing a preferred embodiment of the invention.
- [0027] FIG. 10b is a top view of a portion of FIG. 10a.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

[0028] Referring to FIG. 1, the diamond card 10 of the present invention comprises a generally rectangular, credit card shape device which is relatively thin and which has a body 12 with embedded visual patterns 14 that prevent counterfeiting. Also embedded in the card 10 is a PUF (physically uncontrollable feature) chip 16 which can be interrogated via first and second antennae 18 and 20 that enable communication and interrogation via the mobile device 11 as further described below. The interrogation can be via NFC (near field communication) and/or RFID (radio frequency identification) interfaces in well-known manner. The diamond package 10 also includes visual identification information 22, for example, serial number, bar code and other descriptive information. One portion of the body 12 defines a transparent pouch 26 in which are visibly housed diamonds 30 at a thickened portion 24 of the diamond package 10.

[0029] A key feature is the PUF chip 16. For this invention, one can utilize the PUF chip provided by Verayo Technologies, which operates under U.S. Pat. No. 7,681,103 ("Reliable Generation of a Device That Has Specific Value"). The contents of U.S. Pat. No. 7,681,103 are incorporated by reference herein. The technology of PUF chips has been developing over a number of years and is also described in U.S. Patent Publication Nos. 2010/0122093; 2003/0063772; 2010/0121315; 2008/0237506; and 2008/0112596. The entire contents of said patent publications (identified in the preceding sentence) are incorporated by reference herein.

[0030] As is known, at a microscopic level, no two silicon PUF chips are identical. Unavoidable and uncontrollable variations at the molecular scale make each chip unique. The micro variations are detected and registered for the encrypted

authentication process, as more fully described further on. Each chip provides a unique algorithmic response to random challenges.

[0031] In accordance with well-known technology, these chips can be interrogated by a mobile device, e.g., the mobile device 11, which contains the appropriate interrogation software, including by communicating with the diamond package 10 via an NFC interface to the PUF chip. An NFC interface enables communication at a close proximity (0-5 inches) via wireless transceivers, already known from their application in smart phones for authentication or check-in or check-out of individual units. A purchaser of the diamond card 10 can then transmit a challenge to receive a response from the PUF chip and verify that response with a third party.

[0032] The authentication can be via an RFID interface as well, which enables communication at a slightly larger distance of approximately 0-50 inches via the wireless transceivers. It too can be used for authentication and inventory taking of a large number of items in a particular warehouse location or container.

[0033] The smart phone 11 can utilize cellular or WiFi connectivity and interface to the PUF chip 16 and authenticate the diamond card 10, by communicating with the third party server via known publicly encrypted communication methods.

[0034] The authentication server in such a case would maintain a secure and encrypted database of unique chip parameters. These parameters include the activation and unique challenge/response algorithm for every PUF chip registered at the server. The server will generate a random challenge for each chip upon presentation and confirm the expected encrypted response. Spoofs of PUF chips cannot be prepared because the challenge is random. In addition, the authentication server may have a reference photograph of the physical placement of the diamonds on the given diamond card, whereby a visual inspection and confirmation of authenticity provides additional protection.

[0035] The etched serial number 36 (FIG. 2a) on the authenticated diamond card 10 can be utilized for inventory tracking by consumers and further facilitates identification.

[0036] The invention can also include providing a locked cabinet space 76 (FIG. 4) which is fitted with an internal RFID transceiver; shelving, containers and is dimensionally supportive of reliable RFID scanning of a quantity of RFID tags, with transceiver(s) connected to an authenticated internet board. The cabinet 76 may include unique PUF chip or chips known to the authentication server which can be all verified through the internet.

[0037] Referring to FIG. 2a, this embodiment of a diamond card 42 has a front face 41 with a visual pattern 32 and an embedded PUF chip 33 and its related antennae, as well as a diamond pouch 26 in which are embedded eight diamonds. The diamonds 30 are encapsulated by an outer clear/transparent plastic or glass, with front and rear plastic or glass layers. Also note the visual serial number 36. The front face 41 of the card 42 shows the table and crown facets of the diamonds 30.

[0038] Referring to FIG. 2b, there is also shown a similar layout with additional information including multiple language instructions 38 directing users/owners to "authenticate" the package at the identified trusted website, for example, www.sww.com, at which the registration information and authentication data is available.

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[0039] In the cross-sectional view of FIG. 2c, it can be seen that the diamonds 30 are held in openings in a central sheeting material 44 and the thickened portion 43 of the card 42 where the pocket 30 is defined.

[0040] In general, the diamond smart card 42 of FIG. 2a is preferably formed in an ISO 7810 format with the two passive wireless powered integrated circuits and antennas, preferably with a package size of about 85.6 mm×54 mm×1 mm. Various additional security measures may be provided, for example, laser inscription and hologram technology may be provided on the card surface, including adjacent to or inside the diamond pocket 30, whereby any attempt to tamper with the contents as by attempting to replace the diamonds with different diamonds would be futile. The basic card and diamonds are inserted into a 7-10 mil plastic sleeve, heat-sealed at the edges to close permanently. Ink technologies can be incorporated in the package which would cause bleeding of the ink on any attempt to tamper with the package and so provide further counterfeit deterrence or at least tampering evidence. The card-like diamond package can have some deflection ability similar to a credit card or the like.

[0041] For an added security measure, reference is now made to FIG. 3 which shows the diamond pocket 30 from the rear face of the diamond card showing basically the pavilion end (culet) of the diamonds 30 and a material 31 which is interspersed between the diamonds and which is intended to provide an added security measure. Preferably, the material 31 consists of microspheres having diameters of a fraction of a millimeter, in an array of colors with some diameter variations, all admixed. When the card 10 is manufactured, these microspheres 31 are spread between the diamonds 30, preferably in a single layer. They provide a completely random 3-dimensional, visual signature which is impossible to duplicate lithographically and absolutely unique to each package. A visual high resolution photograph of the back side of the diamonds card is also registered, and each purchaser can check the package in his/her hand and compare the visual appearance with the stored image. If there was any tampering with the diamond package, it would be impossible to recreate the random microsphere distribution and unique color pattern. Simply choosing any spot of, for example, a 3 mm×3 mm area will immediately reveal whether it is identical to the original image and comprised of microspheres. The package can be provided with a few marker points 33 that allow quick orientation of the visual comparison to the real object image. Alternatively, the material 31 can be precious stone dust in various colors. Lastly, the visual authentication step can be carried out automatically by uploading a photograph taken by the mobile device 11 to the registration server 62 (FIG. 4).

[0042] FIG. 4 provides an overall system diagram of the present invention. Thus, the card manufacturer 52 produces the blanks of the card body with the PUF chips already embedded with the various serial numbers and visual printing thereon, leaving empty the pouch location 30. The supply of blank cards 54 are purchased by the final card packager and issuer 56 which selects a number of diamonds, for example 8, as indicated on the face page of the card 42 (FIG. 2a), and selects the diamonds to have an aggregate market value of say \$10,000.00. This type of a card has a nominal \$10,000.00 value upon issuance. Preferably, the cards 58 also list a "date of issue" which indicates that it has/had the nominal value on that issue date. Also, a small pack of low point diamonds may be included with the 8 main diamonds to cause the value of the card to basically equal the nominal card value on the date of

issuance. These packed diamond cards 58 are then listed on the issuer's/packager's public server 60. The advertised diamond packs are available for purchase by members of the public 64.

[0043] When (or even prior to) a member of the public 64 has purchased one of the diamond cards 58, that card is immediately recorded with the registration server 62 and during that process not only the PUF information is provided from the issuer 56 (or alternatively from the card manufacturer 52), but a visual high resolution photograph of the diamonds and their various GIA or similar certification information are also placed and recorded on the server 62. The server 62 thereby develops a growing database 70 of diamond cards which have been purchased by the public 60.

[0044] The public does not necessarily have to buy the diamond packages from the issuer(s) 56. That is, as the market will develop, members of the public 64 can advertise their individual packages on the marketplace server 66 to enable other members of the public to trade with them directly relative to these registered diamond card packs, utilizing the verification process noted above, which only requires using the mobile phones 11 to authenticate the received package(s) by communicating with the server 62 and verifying that the PUF chip identity and the visual images are authentic. Another form of verification comprises inspecting the physical diamonds with a loop or other magnifying device and comparing the inclusions on the diamonds in the package, and other characteristics such as their color, carat weight, cut, etc. against the GIA or other certificates also on store.

[0045] The marketplace server 60 also allows its users to communicate with a pricing information databases 68, for example, Rappaport reports, and other data sources to complete the verification process and commercial transaction. When a member of the public 64 is satisfied that what he/she is purchasing is authentic, payment can be effected through a Paypal or other third party secured server 74 which holds the funds and pays them when authorization is provided from the member of the public 64. The warehousing facility 76 allows the members of the public 64 to store their merchandise thereat, so that they do not have to be kept at home or in private safes and the like. It should be noted that the card packager 56 may advertise to the public 64 its requirements for various diamond sizes and qualities for producing the diamond cards, which will allow the public to offer to the packager 56 the discrete diamonds for purchase, further expanding the overall market in diamonds.

[0046] The standardized packages do not have to have an initial nominal value of \$10,000.00. Preferably, they will be issued at several nominal values, for example, a \$10,000.00 card, a \$40,000.00 card, and a \$100,000.00 card. Once the cards are issued, they can be traded and prices paid for them subject to the fluctuations of the diamonds market, based on the actual diamonds in each package. Also, the number of diamonds in the package may be higher or lower than the number shown in the described embodiment.

[0047] Referring to FIG. 5, an embodiment of a diamond smart card 120 in accordance with the present invention may be comprised of eight sandwiched layers and a diamond cup, as described below. In FIG. 5, a core section 122 of the diamond smart card 120 comprises five layers, including a clear PVC layer 122a measuring about 0.05 mm; a white printed PVC layer 122b measuring about 0.152 mm; a white PVC with a pocket for an RFID interface and PUF chip, measuring about 0.458 mm; a white printed PVC layer 122d

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measuring about 0.152 mm; and a clear PVC layer 122e measuring about 0.05 mm. The core layers all have a respective circular cutout 122f accommodating therein a diamond cup 126 which is a plastic injection of a PVC foam insert that holds the diamonds. The diamond cup 126 also passes through an optically clear adhesive layer 124 measuring about 0.0127 mm and is further received in a bottom layer 130 which is a vacuum formed back with a pocket 130a for the diamond cup 126 and which measures about 0.152 mm in thickness. The top of the smart card 120 is covered by an optical layer 128 of clear polycarbonate material measuring about 0.152 mm.

[0048] FIG. 6 is a flowchart of an algorithm which is intended to prevent speculation and arbitrage schemes by members of the public 64 which might interfere with the ability of evolving a true market in the standardized diamond packages of the present invention. For example, members of the public 64 might systematically query the server 60 for no other purpose than to learn the precise nature, identity and makeup of the diamonds in the diamond cards 58 that are being offered by the card packager 56. The purpose thereof might be to create a catalog of those diamonds and select out and remove from circulation specific packages which a speculator or an arbitrageur might perceive to offer a price advantage over the standardized packages.

[0049] Accordingly, the flowchart of FIG. 6 provides an optional algorithm that would prevent such speculation or arbitrage activities by presenting members of the public 64 who visit the diamond card server 60 with the question (at step 82) whether they wish to buy an available diamond card on a "closed" transaction or an "open" transaction basis as indicated at decisional step 84. The preference of the invention is that people buy those cards on a "closed" transaction basis similar to the manner of purchase of rough diamonds packages offered by De Beers. However, if someone wishes to actually see the physical diamonds in a particular package using the "open" transaction, the flowchart takes the potential purchaser 64 to step 104 at which the buyer can be presented with a choice of perhaps a hundred smart cards to sift from, which may be identified only by serial numbers and issue dates and nominal values. When the purchaser picks one particular serial number, he will be shown the details of that card at steps 106, 108 and 110, upon paying a viewing fee, for example, five percent payable for the right to pre-examine and possibly reject the given card.

[0050] At step 112, the potential purchaser must indicate whether she wishes to buy the particular diamond card. If not, the potential purchaser is asked at step 116 whether she wishes to examine other diamond cards. If not, the process ends at step 100. If yes, then the process returns to step 104 and the potential purchaser is asked whether he wishes to see another card package, and so on. If the potential purchaser does wish to buy a selected package, he proceeds along the line 114 to the paying process at step 88.

[0051] Retracing to the decisional step 84, if a potential buyer indicates that she desires a closed transaction, then at step 86, the buyer is charged the nominal price for the card and pays for that card at step 88. Thereafter, the buyer receives all the information fully identifying the diamonds and other information associated with the particular card at step 90. At decisional step 92, the buyer is asked whether he wants the actual, physical card delivered to him or, instead, maintain the purchased card in storage, for example, at the warehouse 76. If the buyer opts for storage, then at step 94 that particular

purchased diamond card is processed for being sent to storage. The buyer may receive instead a counterfeit-proof, pseudo card which is associated with the actual diamond card that has been purchased. If at any time a purchaser wishes to receive the physical card, he can receive it, as indicated in step 98, by returning the pseudo card. This enables trading in the pseudo cards without the need to ship or deliver the physical diamond cards. The process ends with the step 100, as previously noted.

[0052] On the other hand, if a purchaser asks for physical delivery, then, as indicated in step 102, physical delivery will be made within a set time period, for example, ten days, thereby preventing speculation and arbitrage attempts. If anyone wishes the card to be overnighted to them, then they must pay a premium; for example, five percent, which again discourages more speculation and arbitrage activities.

[0053] The algorithm and process of FIG. 6 is, as noted above, intended to instill in the marketplace the idea that diamond cards of the same denominations are fungible and that it would be futile, as well as expensive and time consuming, to purchase these cards in order to break them apart to retrieve the physical diamonds therein for speculative or arbitrage purposes.

[0054] As also indicated in FIG. 6, the public may also access a database 78 associated with the server 60 (or which may be accessible through other sources that publish an index of diamond prices) for cards previously issued) to obtain current prices by reference to the issue date thereof. For example, a card that was issued Feb. 10, 2014 might be indicated in the price database 78 to have gone up, say, 5.6%, thirty days later, based on benchmark records or public information that indicate for each type of stone the appreciation (or depreciation) the given diamonds have experienced since their issue date.

[0055] The cards as described above are indicated to be of a certain nominal card value as of their issue date. It may be difficult to achieve or implement that nominal card value with just the 8 diamonds in the package. To solve that problem as well, the invention herein also contemplates including within the diamond cup a pack of small sized chip diamonds with an aggregate value of, for example, a few hundred dollars, so as to bring the total value of the diamond card very closely to the nominal value, on the day that the card is issued.

[0056] In this connection, also note that when a purchaser has purchased a particular card which has a nominal value of, say, \$10,000, but is purchasing it sixty days after the issue date printed on the card face, one could consult the database 78 and pay a price which might be slightly higher (or lower) than the nominal value, since the diamonds in the card may actually have appreciated or depreciated in the sixty days interim. This can be done seamlessly with an APP stored on the Buyer's/Seller's mobile phone or desktop computer or tablet device, etc.

[0057] Referring to FIG. 7, in accordance with a further embodiment of the invention, the overall system adds a title insurance facility or module 61 which can be associated with the diamond card server 60. Purchasers of the diamond cards 58 will be provided with title insurance which protects them regarding the authenticity and other attributes of the diamond cards. Alternatively, members of the public 64 can arrange their own title insurance and pay for it themselves, if they exchange diamond cards amongst themselves.

[0058] Referring to FIG. 8, in accordance with a further embodiment of the invention, a diamond card 810 comprises

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a base 820 in a form of a ceramic back, with a peripheral wall (preferably rectangular) which houses at the left side thereof, a ceramic cup 822 at the bottom of which may be provided the PUF chip 840 with its PUF chip antenna or NFC facilities 816 which are located at the bottom of the ceramic cup 822. A diamond holder 822 sits at the bottom of the ceramic cup and has the holders/settings for holding a plurality of diamonds 826. The ceramic cup 822 is closed off by a sapphire or a gorilla glass cup cover 828 with a card core 830 over it with an exposed window 831. Finally, a sapphire or a gorilla glass outer cover 832 seals in and closes off the ceramic back in a manner which will create visible marks and which will destroy the PUF circuit if any attempt is made to penetrate into the card to replace or tamper with the diamonds therein.

[0059] FIGS. 8a through 8d show details of the diamond card embodiment of FIG. 8.

[0060] FIGS. 9a through 9d show further details of the diamond card embodiment of FIG. 8.

[0061] The diamond card, which may be known by its various trademarks, including V^oULT, SECURED PASSPORT, DIAMOND COIN and other trademarks is a globally portable store of wealth, based on laboratory-certified, investment-grade diamonds. The card is small enough to fit discretely in a pocket and easy to authenticate and price. The diamond cards can be conveniently liquidated anywhere in the world.

[0062] The diamond package seals laser inscribed diamonds inside a robust ceramic and advanced electronic device the size of a credit card. Wireless integrated circuits fused inside, a micro-printed signature, laser inscription and other technology, electronically and physically characterize the state of the art diamond instrument. The diamonds cards can be opened and destroyed to recover the diamonds, but cannot be modified, duplicated or imitated.

[0063] The diamond card can be viewed in part as an appreciable hard asset, a diamond investment, also as a commodity and, in addition, as a beautiful collectible card which can function as a secure, portable, private liquid investment. The combination of certified diamonds, portability, authentication and security, along with transparent pricing and global liquidity defines the product. It is a compact, portable asset marketable through an exchange and a transferable store of wealth.

[0064] As described above, the invention uses PUF (physical uncontrollable chips) to provide unique characteristic in each diamond card, that can be checked by the chip circuitry responding to unique and random challenge codes. The two antennas provide a wireless communication and access to the PUF chip and their NFC and RFID technology provide electronic and visible manufacturing complexity that is difficult if not impossible to mimic. Similarly, the inscribed serial number is visible and easily read for purposes of identification in inventory taking. The code itself may be chosen from among the chip's production serial number, randomly assigned or assigned based on its type, or year of packaging and other relevant information. Overall, the physical inscription process is difficult to mimic or alter being that it is located under the surface of the card.

[0065] In accordance with a preferred method of fabrication, the instant invention has been reduced to practice, utilizing the following steps:

[0066] 1. A smooth and firm silicon mold formed with a high polished steel positive mold and forming a matrix of disc-shape cavities is initially prepared. Each cavity, which may be referred to herein as a puck cavity, preferably has a dimension of about 30 mm in diameter and 8 mm in depth.

[0067] 2. Each cavity is filled with a quantity (preferably 0.75 cc) of a resin top layer, preferably using a two-part optically clear urethane resin. This layer forms a lens and the process allows the lens layer to cure and be stored for later use.

[0068] 3. At a time of assembly, a quantity, preferably 1.5 cc, of resin is injected at a depth equal to the dimension of diamonds from the table to the crown.

[0069] 4. Several diamonds are placed into each puck position, table down and arranged artfully.

[0070] 5. A quantity of microspheres is sprinkled into the resin in a manner that ensures separation and sinking to the bottom. Preferably, the microspheres are 500 micrometer red glass microspheres at 2.50 g/cm³. These are sprinkled into the resin. The number of microspheres preferably numbers about 8 to 15 microspheres, but clearly more or less can be used.

[0071] 6. Each puck location is thereafter filled with more resin in a quantity sufficient to cover the culets of the diamonds. The resin is then cured for about one hour.

[0072] 7. A white resin layer is placed atop the previously cured layer and an NFC tag is placed therein and covered with white resin to an exact total height specified, using a measuring laser to control the fill volume. Preferably, 0.5 cc of the white resin is injected. The white resin is cured for about six hours, or for about two hours, when an oven is used.

[0073] 8. The puck with the diamonds, microspheres and NFC tag therein is removed from the silicon mold.

[0074] 9. Each diamond puck is subsequently mounted in a card container with an RFID card, as previously described.

[0075] When formed as described above, the diamond card of the present invention provides various benefits including an attractive consumer display, an ability to positively identify individual stones via their inscriptions and defect characteristics and high portability in that the diamonds are packaged in a small disc-shaped puck of about 30 mm×9 mm.

[0076] The embedded NFC tag preferably comprises a 25 mm wound antenna and an NXP Semiconductors Mifare DESFire EV1 2K chip, which supports 848 Kbits/s data transfer through NFC, 168 bit 3DES hardware encryption and 2K of memory.

[0077] This chip is programmed with a server challenge key, the public encryption key to the card's authentication service, and information about the DIAMOND COIN puck. During an enrollment of any given diamond card, access circuitry in the EV1 is "burnt out", making it impossible for an attacker to alter the encrypted program or content.

[0078] The encryption data for the EV1s is managed by a Safenet Luna HSM (Hardware Security Module). The authentication proof never leaves the encrypted hardware of this equipment. The card's Authentication App is a mobile phone App which enables communication between the EV1 chip and the system's Server, enabling collecting authentication evidence, such as the location of photographs of the particular DIAMOND COIN.

[0079] The basic authentication process proceeds as follows:

[0080] 1. With the phone's NFC feature enabled, the user scans the vULT card, and communication with the NFC tag is opened. Basic information such as the serial number, product model and stone count is read by the app.

[0081] 2. The EV1 challenges the vULT authentication server and provides its serial number using the server's public key.

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[0082] 3. The authentication server responds to the challenge using that EV1's public encryption key.

[0083] 4. Through this fully encrypted connection, the server sends a random challenge to the EV1, which returns a unique response. If correct, the EV1 is authenticated.

[0084] 5. As part of the authentication process, the user takes a new photo of the DIAMOND COIN with the vULT Authentication App. If the expected number of diamonds was detected by the app's analysis, through the encrypted connection, this photo is uploaded to the Authentication Server.

[0085] Using an image analysis system, the sample image is analyzed and compared to a reference photo of the particular DIAMOND COIN taken during manufacture.

[0086] The count, size and elective positions of the diamonds, and the count and relative positions of every taggant is statistically compared between the original and the sample. When a total match score is achieved, which is deemed to be sufficient for authentication, then the images and, indirectly, the particular DIAMOND COIN is authenticated.

[0087] Thereby, the DIAMOND COIN of the present invention provides the additional benefits of wireless authentication, via smartphone NFC, of the embedded, encrypted silicon chip. The product is highly tamper resistant and tamper evident. The taggants randomly embedded in the resin form a unique visual fingerprint. The exact geometry of the diamonds and the taggants which have been pre-photographed and which comport to a reference are virtually impossible replicate.

[0088] With reference to FIG. 10a, one can note the top layer which forms the lens, and the next layer in which the entire diamonds are embedded, with the microspheres shown at a location above the pavilion, along the crown sections of the diamonds. In the partial top view of FIG. 10b, one can note three diamonds and eleven red microsphere taggants, the locations of which is random and statistically impossible to replicate or counterfeit.

[0089] As described above, the diamond packaging technology and its accompanying system including the various web based computer servers and entities will be recognized by the reader to have created a new paradigm for the owning, marketing, exchanging diamond merchandise in a manner which very closely mimics the public exchanges for securities, coins, gold bullion and the like. The invention will enable individuals to invest part of their assets in diamonds and the marketplace for diamonds will grow much larger and allow individuals access to a new investment vehicle. The card technology also has a value as a store of wealth and method of exchange for valuables other than diamonds.

[0090] Although the present invention has been described in relation to particular embodiments thereof, many other variations and modifications and other uses will become apparent to those skilled in the art. It is preferred, therefore, that the present invention be limited not by the specific disclosure herein, but only by the appended claims.

What is claimed is:

1. A tamperproof diamond package, comprising:
 - a package body;
 - at least one chip embedded in the package body and at least one antenna configured to enable communication with the chip;
 - anti-counterfeiting visual impressions on the package body;
 - a diamond pouch provided at a predetermined section within the package body; and

one or more diamonds located inside the diamond pouch and an outer covering encasing the package body and configured to reveal any tampering with the one or more diamonds located in the diamond pouch.

2. The diamond package of claim 1, wherein the package body comprises a thin, credit card shaped body with a thickness that is not greater than 0.25 other dimensions associated with said package body.

3. The diamond package of claim 2, wherein the body shape is rectangular.

4. The diamond package of claim 2, wherein the visual impressions includes at least a serial number, and website information that is configured to enable checking the authenticity of the diamond package.

5. The diamond package of claim 2, wherein the one or more diamonds comprises a plurality of diamonds having an aggregate price equal to a nominal dollar value.

6. The diamond package of claim 5, wherein the nominal dollar value comprises one or more \$10,000.00, \$40,000.00 and \$100,000.00.

7. The diamond package of claim 2, wherein the package body includes a distribution of microspheres that creates a unique visual image in each package that is different from any such image on any other diamond package.

8. The diamond package of claim 7, wherein the microspheres have respective diameters that measure less than or equal to 1 mm, on average.

9. The diamond package of claim 7, wherein the microspheres are manufactured from one or more of a natural, a synthetic, a glass, a polymer, and a ceramic material.

10. The diamond package of claim 9, wherein the microspheres are made of one of polyethylene and polystyrene.

11. The diamond package of claim 2, wherein the diamond pouch includes a distribution of precious stone dust in multiple colors laid out in discrete dust particles.

12. A diamond exchange system, operating in combination with the diamond packages of claim 1, and a system comprising:

one or more entities which package and make available the diamond packages;

a registration server which stores unique identifying information for each of the diamond packages and which provides an interface to members of the public that enable providing to the registration server responses to interrogation signals submitted to a given diamond package and carries out an authentication process that verifies the authenticity of the given diamond package.

13. The system of claim 12, including a marketplace server that is configured to allow members of the public to list diamond packages for sale or to submit purchase requests for diamond packages to be purchased.

14. The system of claim 12, including an auxiliary verification server which is configured to enable access in diamond authenticity certificates that identify the features of the diamonds in the given diamond package in order to obtain the information of the physical diamonds in the given diamond package.

15. The system of claim 12, including an inventorying warehouse and an associated server configured to enable purchasers of the diamond packages to store their diamond packages thereat.

16. The system of claim 12, including at least one price information server that enables automatic pricing of diamonds packaged in any one of said given diamond packages.

17. A method of forming a tamper-proof diamond package, comprising the steps of:

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preparing a card-shaped package having length, width and thickness dimensions and forming in the card body a diamond puck location; and

forming a diamond puck for installing into said puck location, said diamond puck formation including:

- i) forming at least one formation cavity;
- ii) injecting a top layer in said cavity comprising a lens for said diamond puck;
- iii) placing a plurality of diamonds atop said lens with a table surface of the diamonds facing the lens and substantially covering the diamonds with a second layer; and
- iv) placing a plurality of taggants into said resin in a manner whereby said taggants are interspersed between said diamonds and visible from the lens side of the diamond puck.

18. The method of claim 17, further including applying a further layer to a culet side of said plurality of diamonds and embedding therein an electronic chip and thereafter, removing said puck from said formation cavity and installing in said puck location in said card body.

19. The method of claim 17, including providing the card with an RFID circuit.

20. The method of claim 18, further comprising burning the chip to have a unique identity which is impossible to alter.

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